II. MORBIDITY

A. INFECTIOUS DISEASES

West Nile Encephalitis

In 2002, 329 cases of West Nile illness were reported in Louisiana, including 204 cases of West Nile neuroinvasive diseases and 125 cases of West Nile fever. Clinical presentation of neuroinvasive diseases or of West Nile fever was confirmed serologically. Of the 329 cases, 24 (7 percent) resulted in death. Age group distribution showed predominance among persons aged 45 years or older. Based on date of diagnosis, the epidemic curve showed numerous foci progressing in successive waves. The first cases were diagnosed during the second week of June in St. Tammany and Tangipahoa parishes. The weekly number of cases increased rapidly to reach a peak during the first week of August, i.e., the 7th week after the beginning of the outbreak. The weekly number of cases then decreased very progressively until the first week of December, after 17 additional weeks. West Nile infections occurred in 41 of Louisiana's 64, parishes or 64 percent of the total. Including other animals, particularly horses and birds, the West Nile infections were found in 60 of the 64 parishes (94 percent). However, West Nile exhibited a very focal distribution: 12 parishes reporting 10 cases or more comprised 274 cases out of a total of 329 (83 percent). Within these parishes, the distribution was also very focal.

The 2002 West Nile epidemic was characterized by a combination of small foci concentrated within cities or limited rural areas, and sporadic cases in rural areas. These foci were staggered in time. The first outbreaks occurred north of Lake Pontchartrain in St. Tammany, Tangipahoa, and Livingston parishes during June. At the end of that month, foci appeared to the west in East Baton Rouge and Ascension parishes. In July, new foci appeared in Calcasieu and Ouachita parishes in the southwestern and northeastern corners of the state respectively. In mid-July, foci were initiated south of Ponchartrain Lake in the New Orleans metropolitan area (Orleans and Jefferson parishes) and west of Baton Rouge in Pointe Coupee Parish. In mid-August, a focus began in the central Louisiana parish of Rapides.

Antibiotic Resistance

Over the past three years, 43 hospitals in Louisiana have participated in a surveillance system for selected pathogens and drug-resistant isolates at some point. Currently, 31 hospitals provide information to the surveillance system each month on a brief reporting form. Each hospital reports the total number of *S. aureus*, *S. pneumoniae*, and enterococcus species isolated in its laboratory for each month. In addition, it also reports the total number of drug resistant or drug intermediate resistant isolates for each of those organisms. As duplicates are not reported, the forms contain counts on one isolate of methicillin–resistant *S. Aureus* (MRSA), vancomycin-resistant enterococcus (VRE), or drug resistant *S. pneumoniae* (DRSP) per patient per hospital visit. Each report is entered into an Access database; from this database, quarterly and annual summary reports are generated for the participating hospitals.

The percentages of DRSP isolated were not significantly different among participating hospitals, ranging from 43.8 percent to 44.2 percent in 2002. The rates for MRSA among reporting facilities showed a significantly increasing trend throughout the year. The rates of detection of drug–resistant isolates in the fourth quarter were 16 percent higher than those in the first quarter. The percentages of VRE ranged from 5.3 percent to 6.2 percent in 2002, but these rates were not significantly different from each other. A trend analysis was conducted to determine if the rates of detection were increasing over the past three years (2000, 2001, and 2002).

The rates of DSRP have not been increasing over the past three years. On the other hand, the rates of MRSA increased between 2000 and 2002. In 2000, the rate of resistance in *S. aureus* was 38.2 percent, in 2001 it was up to 44.5 percent, and in 2002, increased to 53.8 percent. These increases were highly significant. Rates of VRE did not significantly increase over the past three years.

Hepatitis C

Reportable cases of Hepatitis C virus (HCV) infections consist of newly infected individuals who are symptomatic and have elevated liver enzymes as an indicator of recent infection. According to the Centers for Disease Control and Prevention (CDC), it is estimated that 80,000 residents of Louisiana are infected by HCV. Annually, 120 Louisiana residents are expected to die from hepatitis C. About 4,000 individuals (5 percent of those infected by hepatitis C) are candidates for a liver transplant, at a cost of $300,000 per transplant.

There are an estimated 500 to 600 new (acute) infections each year in Louisiana. Since the early 1990s, the state has seen a slow but steady increase of reported new hepatitis C cases. The decline in the number of reported cases of hepatitis C that started in 2001 continued in 2002. This decline was due most likely to a CDC-mandated change in the case definition for acute hepatitis C. Beginning in 1990, the designation for elevated liver enzymes was established by the CDC as 2.5 times the upper limit of normal. However, in 2001, the CDC increased the required elevation level to seven times the upper limit of normal, thus excluding a large number of cases that previously would have been considered reportable.

Meningococcal Invasive Diseases

Meningococcal meningitis is an acute bacterial disease caused by *Neisseria meningitidis*. It is characterized by sudden fever onset, intense headache, nausea and often vomiting, stiff neck, and rash.

Cases of meningococcal invasive disease in Louisiana decreased during the 1980s, and then steadily increased during the 1990s, from a low of 30 in 1990 to a high of 74 in 2001. The slope of increase is 3.2

cases per year. The incidence rate ranges from 0.8 to 1.6 per 100,000. This incidence is similar to U.S. incidence, which is approximately 1 per 100,000 per year.

Based on capsular polysaccharide, there are five groups of meningococci. These groups are important to consider because of their epidemiologic, clinical and preventive importance. The three main groups observed in Louisiana are B, C and Y. Group A and W135 are uncommon in the state. This is important because the quadrivalent vaccine available in the U.S. is effective only against A C, Y and W135. It is ineffective against B, which represents about one-third of all cases in Louisiana.

Infants (0-1 year old) have the highest occurrence of new cases of meningococcal meningitis, at 10 cases per 100,000 population per year. The incidence decreases to reach a plateau of approximately 1.5 cases per 100,000 from ages 5 to 19, then decreases again to a low of 0.4 in the 40-49 age group. Disease incidence then rises slowly as age increases, with the rate being 1.1 in the older than 70 group.

Rabies

Rabies virus, a rhabdovirus, causes acute encephalitis in all warm-blooded hosts, including humans. The case fatality rate is generally considered to be 100 percent. All species of mammals are susceptible to rabies, but only a few species are considered important reservoirs, such as bats, skunks, raccoons, foxes and coyotes.

Louisiana is endemic for the skunk and bat variants of the virus. The cases reported in the state seem to reflect these predominant virus variants (skunk and bat) known to exist in the state. No active surveillance for wildlife rabies is consistently conducted in Louisiana; therefore, the number of cases reported does not reflect the actual picture of the virus in the state.

During the 1970s and 1980s, the number of reported animal rabies cases progressively decreased from 60 to 70 cases per year down to 20 cases per year. In the early 1970s there were cases among dogs and foxes, but these types of cases became very scarce after 1975. During the 1990s, the number of cases averaged 20 per year except for 1994 and 1995, which experienced an outbreak of skunk rabies in the Lafayette area (60 cases of skunk rabies per year). The geographical distribution varies according to species; bat rabies is predominant in the western and northern part of the state as well as the greater New Orleans area.

Salmonellosis

Among the general population, the prevalence rate of *Salmonella infection* is between 0.15 to 0.2 percent at any given time. Rates observed in Louisiana are of the same order of magnitude as in the rest of the United States. The reported case rate among all infants is 180 per 100,000 (0.2 percent of infants), with a

high of 300 per 100,000 at age 3 months. Reported case rates among older age groups range from 5 to 15 per 100,000. *Salmonella* isolates are most common in infants (0 to 1 year of age) and in children (1 to 5 years old). The high rate of identification in these young age groups may result from the prompt seeking of medical care when symptoms become evident among infants and young children and the more frequent ordering of stool cultures from children when healthcare workers investigate a case of diarrhea. These practices result in over-sampling of the child population. Most *Salmonella* infections in children occur outside of child care environments, with only 0.66 percent of cases among infants and children being associated with a daycare setting. There are no gender differences in disease occurrence among children.

Shigellosis

Shigellosis or bacterial dysentery is acute infectious enteritis of humans due to *Shigella*. It has a human reservoir and is transmitted via the fecal-oral route. Ninety- nine percent of *Shigella* isolates come from stools. The peaks and troughs observed in trends of *Shigella* infections are mainly driven by the number of cases in children. There is a slight rise in incidence in young adults, then a decline until rates stabilize in middle age.

Vibriosis

Vibrios are gram-negative, curved, rod-shaped bacteria that are natural inhabitants of the marine environment. Transmission of *Vibrio* infections is primarily through the consumption of raw or undercooked shellfish or exposure of wounds to warm seawater. The most common clinical presentation of *Vibrio* infection is self-limited gastroenteritis, but wound infections and primary septicemia also may occur. Patients with liver disease are at a particularly high risk for significant morbidity and mortality associated with these infections. Early detection and initiation of treatment of these infections is very important, particularly for cholera and invasive *Vibrio* infections, because these infections may rapidly progress to death.

The numbers of reported cases of *Vibrio* infections have remained fairly stable over the past 20 years, ranging from 20 to 50 cases per year, with a slight increase from year to year. The most common *Vibrio* species observed in reported cases in Louisiana is *V. parahemolyticus* (29 percent), followed by *V. vulnificus* (26 percent), *V. cholerae* non O1 (23 percent) and all other *Vibrios* (23 percent), (which include *V. alginolyticus*, *V. damselae*, *V. fluvialis*, *V. hollisae*, and *V. mimicus*.).

Vibrio parahemolyticus

Raw oysters are the primary source of ingestion-associated *V. parahaemolyticus* infection. A review of infections between 1988 and 1997 found that 88 percent of patients with *V. parahaemolyticus* gastroenteritis, and 91 percent of patients with *V. parahaemolyticus* primary septicemia and known food

history, reported eating raw oysters. Consumption of crustacean and molluscan shellfish commonly has been implicated in the transmission of *V. parahaemolyticus*. Studies indicate that the infectious dose of *V. parahaemolyticus* is about 100,000 viable cells ingested. The number of reported cases of *V. parahemolyticus* has remained stable over the years.

Vibrio vulnificus

V. vulnificus is the most important pathogenic *Vibrio* in the U. S. because of its invasiveness and the high fatality rates associated with infection. There has been a steady increase in the number of *V. vulnificus* cases reported every year, which is probably due to increased awareness and an increase in the susceptible population (those with liver disease, hemochromatosis, diabetes, cancers (particularly on chemo or radio-therapy), leukemia, lymphoma, Hodgkin's disease, immune suppression such as HIV, long- term steroid use, alcoholism, chronic kidney disease, and the elderly population).

V. cholerae non-O1

V. cholerae non-O1 can produce a wide range of symptoms: asymptomatic infections, simple diarrhea, or severe diarrheal disease. Some isolates are capable of producing a toxin indistinguishable from *V. cholerae O1*. Diarrhea and simple enteritis are the most common clinical pictures. Approximately one quarter of infected patients have bloody stools. Illness usually is self-limiting and requires no treatment.

Vibrio cholerae O1

Vibrio cholerae O1 represents less than 3 percent of all *Vibrio* cases reported in Louisiana over the past 20 years. Among reported *V. cholerae O1* cases, the last were in 2000. Two were confirmed by culture and identified as serotype O1 Inaba, biotype El Tor toxigenic cases; both cases recovered after being hospitalized. A third case was identified by a significantly elevated Vibriocidal titer, as well as by being positive for cholera toxins by the polymerase chain reaction (PCR) technique. Two of the three individuals were associated with a common seafood meal shared between two different family households.

Other Non-cholerae Vibrios

The increase in reported numbers of other *non-cholerae Vibrios* is attributed to better awareness among medical providers and laboratory testing.

B. TUBERCULOSIS

Background

Pulmonary tuberculosis (TB) occurs as a result of infection of the lungs with an organism named *Mycobacterium tuberculosis,* which infected persons may transmit by coughing. If untreated, a pulmonary TB case may infect others who breathe in the organisms expelled by the infected person. Infection is not limited to the lungs as it can also occur in other regions of the body.

Due to the danger of contagion, individuals who have been exposed to TB should be identified and evaluated. A simple skin test is used to determine if the exposed person has been infected. If the skin test and evaluation reveal that the person has been infected, a course of preventive therapy may be prescribed to protect against progression from TB infection to TB disease. Preventive therapy generally consists of six months of therapy with a single anti-TB drug called isoniazid, or INH.

Treatment of TB disease requires an initial course of four anti-tuberculosis drugs. Length of treatment for TB disease is usually six months, but may vary due to the severity of illness or the presence of other factors, such as the Human Immunodeficiency Virus (HIV). Due to the potentially great public health impact of this infectious disease, and because of the intricacy of the therapy (i.e., length of treatment and number of medications involved), a practice called Directly Observed Therapy (DOT) is employed to assist the patient with his or her therapy and assure completion. With DOT, trained field staff or medical personnel monitor the efficacy of treatment and the patient's compliance with the treatment regimen.

2003 Status

Louisiana reported 260 cases of TB in the year 2003, for a case rate of 5.8 per 100, 000 population. This represents a 13 percent increase from the year 2002 figure of 230 cases (5.1 cases per 100,000 population). This is the first increase in rates since 1996.

Tuberculosis Case Counts Louisiana, 1999-2003

1999	*2000*	*2001*	*2002*	*2003*
357	332	294	230	260

Source: Louisiana Department of Health and Hospitals, Office of Public Health, Tuberculosis Program

In 2003, Louisiana's state ranking for TB case rates (i.e., cases per 100,000) was the tenth highest in the nation. The state's year 2003 rate was similar to those in neighboring states but was significantly higher than the national rate of 5.1 per 100,000, which declined from 2002 to 2003 by 1.9 percent.

Tuberculosis Cases and Rates* Louisiana and Neighboring States, 2003		
State	Number of Cases	Case Rate
Alabama	258	5.7
Arkansas	127	4.7
Louisiana	260	5.8
Mississippi	128	4.4
Texas	1,594	7.2
United States	14,871	5.1

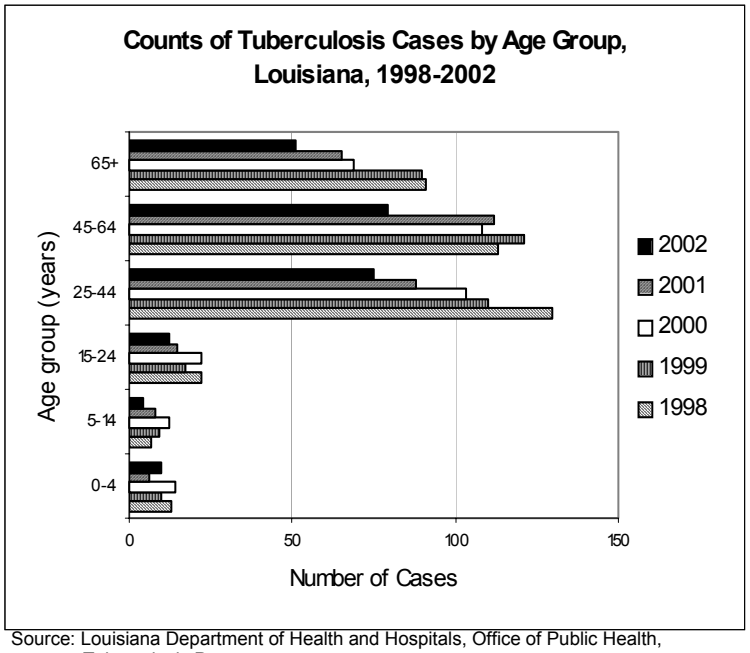
*Rate per 100,000 population

Source: Louisiana Department of Health and Hospitals, Office of Public Health, Tuberculosis Program

National Tuberculosis Surveillance System, Division of Tuberculosis Elimination, Centers for Disease Control and Prevention. Provisional 2002 data.

Drug-resistant TB continues to be a problem in Louisiana. In 2003 one case of multi-drug-resistant tuberculosis (MDR-TB) was reported, while the incidence of INH resistant TB rose to 4.6 percent (the recommended threshold for initiating a four-drug anti-TB regimen for new (or suspected) cases of TB is 4 percent).

As shown in the following graph, a decrease in the number of reported cases of TB in Louisiana was observed in children (below age 15 years), and over 65. The increase occurred in 24 to 44 and 45 to 64 age groups.



Source: Louisiana Department of Health and Hospitals, Office of Public Health, Tuberculosis Program

Louisiana Tuberculosis Cases and Rates By Region and Parish, 2003 State Total = 260 State Case Rate = 5.8 per 100,000		
Region/Parish	Cases	Rate/100,000
Region 1	100	9.7
Jefferson	****	5.4
Orleans	****	14.7
Plaquemines	****	11.2
St Bernard	****	3.0
Region 2	20	3.4
Ascension	****	2.7
East Baton Rouge	****	3.0
East Feliciana	****	9.4
Iberville	****	9.4
Pointe Coupee	****	4.1
West Baton Rouge	0	0.0
West Feliciana	0	0.0
Region 3	21	5.3
Assumption	****	4.2
Lafourche	****	2.2
St Charles	****	4.4
St James	0	0.0
St John	****	4.6
St Mary	****	10.3
Terrebonne	****	7.5
Region 4	25	4.6
Acadia	****	5.1
Evangeline	****	5.7
Iberia	****	1.3
Lafayette	****	7.3
St Landry	****	2.3
St Martin	0	0.0
Vermilion	****	5.6
Region 5	17	6.0
Allen	****	8.2
Beauregard	****	3.1
Calcasieu	****	5.4
Cameron	****	43.1
Jefferson Davis	0	0.0
Region 6	****	1.3
Avoyelles	0	0.0
Catahoula	0	0.0
Concordia	0	0.0
Grant	0	0.0
LaSalle	0	0.0
Rapides	****	3.1
Vernon	0	0.0
Winn	0	0.0

Louisiana Tuberculosis Cases and Rates
By Region and Parish, 2003
State Total = 260
State Case Rate = 5.8 per 100,000

Region/Parish	Cases	Rate/100,000
Region 7	37	7.1
Bienville	0	0.0
Bossier	****	7.3
Caddo	****	7.3
Claiborne	****	17.3
DeSoto	****	11.8
Natchitoches	0	0.0
Red River	0	0.0
Sabine	0	0.0
Webster	****	13.7
Region 8	25	6.9
Caldwell	****	9.4
East Carroll	0	0.0
Franklin	0	0.0
Jackson	****	12.6
Lincoln	****	14.1
Madison	0	0.0
Morehouse	****	6.2
Ouachita	****	7.3
Richland	****	4.7
Tensas	0	0.0
Union	****	8.9
West Carroll	0	0.0
Region 9	11	2.5
Livingston	****	2.2
St Helena	0	0.0
St Tammany	****	3.6
Tangipahoa	****	1.0
Washington	****	2.3

Source: Louisiana, Department of Health and Hospitals, Office of Public Health, Tuberculosis Program
**** Cells suppressed to protect confidentiality

C. Sexually Transmitted Diseases

Overview

Sexually transmitted diseases (STDs) are the most commonly reported diseases in the United States and affect almost 15.3 million people in the nation among all population groups each year. By age 21 years, one in five young adults will have received treatment for an STD. Among the most serious complications are pelvic inflammatory disease, infertility, ectopic pregnancy, blindness, cancer associated with human papillomavirus, fetal and infant deaths, and congenital defects.[1]

STD Rates* and National Rankings** Louisiana, 1999-2003

Year	Primary and Secondary Syphilis		Gonorrhea		Chlamydia	
	Rate	Rank	Rate	Rank	Rate	Rank
1999	7.0	3	301.9	3	380.8	4
2000	4.8	8	302.9	2	408.2	3
2001	4.0	8	291.0	1	423.0	4
2002 ***	3.4	8	255.0	1	412.9	4
2003 ***	4.1	-	263.8	-	459.0	-

* Rates per 100,000 Population, Census 1990

** States ranked from highest to lowest disease incidence. Nationwide ranks for 2003 currently not available.

*** Rate per 100,000 Population, Census 2000

Sources: Louisiana Department of Health and Hospitals, Office of Public Health, STD Control Program 2003
Centers for Disease Control and Infection, STD Surveillance Report 2002

Syphilis

Syphilis infections are caused by *Treponema pallidum*, a spirochete (bacterium). The primary stage of the disease is characterized by a painless, indurated ulcer that appears at the site(s) of exposure in about 21 days (range of 10-90 days), and lasts from 1 to 5 weeks. The secondary stage, which usually appears 1 to 5 weeks after the primary ulcer has healed, is characterized by skin rash, mucous patches, and *condyloma lata* (fluid-secreting skin eruptions), sometimes accompanied by generalized lymphadenopathy, headache, and fever. The latent stage is defined as any interval following the primary stage during which the infected individual has no clinical signs or symptoms.

Louisiana had the third highest rate of primary and secondary syphilis nationwide during the years 1998 and 1999. In the year 2000, the rate dropped to the eighth highest, and that ranking was maintained in the years 2001 and 2002. The total number of reported cases of early syphilis (primary, secondary, and early latent syphilis) had been consistently declining, from 5,373 cases in 1993, to 335 cases in the year 2002. In the latter year, 49.6 percent of early syphilis cases occurred in females, and 89.6 percent of the cases among blacks. Sixty-six percent of early syphilis cases occurred within the 15 to 34 year old

[1] National Center for Health Statistics. *Healthy People 2000 Review, 1997*. Hyattsville, Maryland: Public Health Service. 1997.

population group. During the last five years, sharp and consistent declines in early syphilis rates have occurred. In the white population, the rate per 100,000 people decreased from 3 to 2 in the years 2000 to 2001, respectively, and was 1 in year 2002. In blacks, the rate per 100,000 people decreased from 61 to 48 between the years 1998 and 1999, to 28 in 2000, 25 in 2001, and 21 in 2002. In 2003 the rate increased to 22.5.

Early Syphilis (Primary, Secondary, and Early Latent) Rates* by Sex and Race
Louisiana, 1999-2003

Year	White			Blacks			Other		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
1999	3.0	3.0	3.0	48.0	47.0	48.0	0.0	7.0	4.0
2000	2.0	3.0	2.0	32.0	26.0	28.0	0.0	2.0	1.0
2001	2.0	1.0	2.0	27.0	23.0	25.0	0.0	5.0	2.0
2002 **	0.9	1.1	1.0	22.2	19.3	20.7	3.7	2.5	3.1
2003 **	1.9	1.5	1.7	23.6	21.6	22.5	1.2	1.3	1.2

* Rates per 100,000 Population, Census 1990

** Rate per 100,000 Population, Census 2000

Source: Louisiana Department of Health and Hospitals, Office of Public Health, STD Control Program 2003

The Louisiana incidence rate for primary and secondary syphilis for 2003 was 4.1 per 100,000 people (Census 2000), while the latest national rate available (year 2002) was 2.4. The *Healthy People 2010* rate objective for primary and secondary syphilis is 0.2.

Primary and Secondary Syphilis Rates
Louisiana, Neighboring States, and United States, 1998-2002

State	1998	1999	2000	2001	2002
Alabama	6.3	4.6	2.8	3.2	3.4
Arkansas	4.3	3.4	4.1	1.8	1.3
*Louisiana **	9.8	7.0	4.8	3.9	3.4
Mississippi	9.5	7.0	4.9	4.9	1.7
Texas	2.2	2.4	2.0	2.3	2.8
United States	2.6	2.4	2.2	2.2	2.4

* Rates per 100,000 Population, Census 1990

Gonorrhea

Infections by *Neisseria gonorrhoeae* may be symptomatic or asymptomatic, and may include genital, anorectal, and/or pharyngeal infections.

Louisiana had the fourth highest nationwide rate of gonorrhea in the year 1998, the third highest in the years 1999 and 2000, and the highest in the year 2001. The total number of reported cases of gonorrhea had been increasing (mainly due to improved laboratory reporting) from 12,543 in 1998 to 13,265 in 2000. In the year 2002, the total number of reported cases of gonorrhea was 11,396, which increased to 11,790 in 2003. Slightly over half (51.3 percent) of the cases of gonorrhea in Louisiana in the year 2003 occurred in females. Of the total gonorrhea cases, 77.4 percent occurred in blacks. Age-group wise,

29.3 percent of the cases occurred among teens aged 15 to 19 years old, while 36.8 percent of the cases occurred among 20 to 24-year-olds.

Gonorrhea Rates* by Sex and Race

Louisiana, 1999-2003

Year	White			Black			Other		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
1999	25.0	48.0	37.0	966.0	792.0	874.0	41.0	63.0	52.0
2000	22.0	39.0	31.0	1019.0	780.0	892.0	22.0	32.0	27.0
2001	23.0	40.0	31.0	929.0	727.0	821.0	17.0	46.0	32.0
2002 **	21.1	45.7	33.7	702.7	598.6	648.2	8.6	15.1	11.8
2003 **	23.0	41.0	32.4	697.2	567.7	628.7	29.6	33.8	31.7

* Rates per 100,000 Population, Census 1990
** Rate per 100,000 Population, Census 2000
Source: Louisiana Department of Health and Hospitals, Office of Public Health, STD Control Program 2003

The Louisiana incidence rate of gonorrhea for 2003 was 264 per 100,000 population (Census 2000), while the latest national rate available (year 2002) was 125.0. The *Healthy People 2010* objective for gonorrhea is to reduce the rate to 19.0 per 100,000 population.

Gonorrhea Rates
Louisiana, Neighboring States, and United States, 1998-2002

State	1998	1999	2000	2001	2002
Alabama	292.7	249.2	276.0	251.4	227.5
Arkansas	155.7	126.4	142.7	172.2	171.5
Louisiana *	286.1	301.7	302.9	274.2	254.8
Mississippi	388.4	376.0	332.9	272.8	241.7
Texas	166.2	164.2	164.2	144.0	129.4
United States	131.6	132.0	131.6	128.5	125.0

* Rates per 100,000 Population, Census 1990

Chlamydia

Infection caused by *Chlamydia trachomatis* is among the most prevalent STDs in the United States. Therapy is commonly based on the clinical syndrome, and is often administered simultaneously with treatment for gonorrhea.

Louisiana had the fourth highest rate of chlamydia nationwide in 1999. The rate rose to third highest in 2000 and decreased to fourth highest in 2001 and 2002. Since 1998, the number of reported cases of chlamydia has been increasing. The total number of reported cases was 15,305 in 1998, further increased to 16,573 in 1999, and to 17,921 in 2000. The case count for chlamydia then decreased slightly to 17,859 in 2001, rose to 18,451 in 2002, and to 20,513 in 2003. In 2003, 81.2 percent of reported cases of chlamydia in Louisiana occurred in females; 65.7 percent of cases occurred in blacks; 37.8 percent of cases occurred in the 15 to 19-year-old age group; and 39.7 percent among 20 to 24-year-olds. The

Louisiana chlamydia rate for 2003 was 459 per 100,000 population (Census 2000), while the latest national rate available (year 2002) was 296.5. The *Healthy People 2000 Review 1997* objective for C*hlamydia trachomatis* infections was to reduce the prevalence in women under 25 years of age to no more than 5 percent (as measured by a decrease in the prevalence of chlamydia infection among family planning clients).

Chlamydia Rates* by Sex and Race
Louisiana, 1999-2003

	White			Black			Other		
Year	Males	Females	Total	Males	Females	Total	Males	Females	Total
1999	30.0	141.0	87.0	448.0	1369.0	941.0	24.0	198.0	111.0
2000	27.0	140.0	85.0	518.0	1477.0	1031.0	12.0	115.0	63.0
2001	28.0	145.0	88.0	457.0	1539.0	1035.0	22.0	90.0	56.0
2002 **	30.0	150.1	91.5	403.7	1392.0	927.7	17.2	65.4	41.0
2003 **	29.8	157.3	94.9	401.3	1397.7	928.7	42.0	207.5	124.8

* Rates per 100,000 Population, Census 1990
** Rate per 100,000 Population, Census 2000
Source: Louisiana Department of Health and Hospitals, Office of Public Health, STD Control Program 2003

Chlamydia Rates
Louisiana, Neighboring States, and United States, 1998-2002

State	1998	1999	2000	2001	2002
Alabama	231.3	283.2	350.7	326.6	351.0
Arkansas	162.4	229.9	243.8	272.3	273.5
Louisiana *	347.6	380.5	408.2	399.2	412.7
Mississippi	385.7	417.0	458.6	414.6	414.8
Texas	305.9	314.1	343.3	334.5	333.4
United States	234.2	251.6	257.5	278.3	296.5

* Rates per 100,000 Population, Census 1990

Sexually Transmitted Disease Rates+ by Parish
Louisiana, 2003

Parish	Early Syphilis (Primary, Secondary, and Early Latent)	Gonorrhea	Chlamydia
State Total	8.5	255.0	413.0
Acadia	0.0	131.0	182.0
Allen	0.0	1.0	263.0
Ascension	4.0	59.0	108.0
Assumption	0.0	137.0	244.0
Avoyelles	29.0	116.0	251.0
Beauregard	0.0	82.0	206.0
Bienville	0.0	267.0	495.0
Bossier	2.0	288.0	544.0
Caddo	11.0	798.0	1093.0
Calcasieu	5.0	214.0	314.0
Caldwell	0.0	152.0	303.0
Cameron	0.0	60.0	200.0
Catahoula	0.0	156.0	229.0
Claiborne	0.0	303.0	540.0
Concordia	5.0	242.0	361.0
DeSoto	0.0	373.0	604.0
East Baton Rouge	26.0	238.0	319.0
East Carroll	0.0	425.0	934.0

Sexually Transmitted Disease Rates[+] by Parish Louisiana, 2003			
Parish	Early Syphilis (Primary, Secondary, and Early Latent)	Gonorrhea	Chlamydia
East Feliciana	38.0	94.0	267.0
Evangeline	0.0	93.0	285.0
Franklin	9.0	127.0	165.0
Grant	0.0	118.0	203.0
Iberia	11.0	239.0	464.0
Iberville	3.0	141.0	321.0
Jackson	0.0	188.0	357.0
Jefferson	2.0	104.0	215.0
Jefferson Davis	0.0	86.0	239.0
Lafayette	17.0	210.0	313.0
Lafourche	2.0	114.0	239.0
LaSalle	0.0	35.0	112.0
Lincoln	19.0	332.0	426.0
Livingston	4.0	34.0	88.0
Madison	7.0	175.0	466.0
Morehouse	3.0	380.0	477.0
Natchitoches	0.0	563.0	906.0
Orleans	13.0	602.0	961.0
Ouachita	1.0	230.0	272.0
Plaquemines	0.0	86.0	164.0
Pointe Coupee	44.0	101.0	246.0
Rapides	7.0	241.0	492.0
Red River	0.0	447.0	852.0
Richland	0.0	191.0	415.0
Sabine	0.0	145.0	183.0
St. Bernard	0.0	65.0	122.0
St. Charles	2.0	83.0	183.0
St. Helena	180.5	181.0	409.0
St. James	0.0	80.0	311.0
St. John	0.0	123.0	330.0
St. Landry	0.0	184.0	304.0
St. Martin	4.1	169.0	196.0
St. Mary	2.0	172.0	262.0
St. Tammany	3.0	66.0	143.0
Tangipahoa	25.0	328.0	542.0
Tensas	0.0	196.0	665.0
Terrebonne	2.0	160.0	286.0
Union	0.0	189.0	206.0
Vermilion	0.0	48.0	71.0
Vernon	0.0	131.0	329.0
Washington	0.0	184.0	275.0
Webster	0.0	201.0	354.0
West Baton Rouge	9.0	69.0	213.0
West Carroll	0.0	73.0	219.0
West Feliciana	0.0	93.0	205.0
Winn	0.0	189.0	314.0

[+]Rates per 100,000 Population, Census 2000

Source: Louisiana Department of Health and Hospitals Office of Public Health, STD Control Program 2003

D. HIV/AIDS

Background

Acquired Immunodeficiency Syndrome (AIDS) is caused by the *human immunodeficiency virus*, or HIV. People infected with HIV can develop many health problems, including extreme weight loss, severe pneumonia, cancer, and damage to the nervous system; these illnesses signal the onset of AIDS. The time at which symptoms first begin to appear varies from person to person. In some people, these illnesses may develop within a year or two, while others may remain asymptomatic for 10 years or more. Although recent advances in treatment have significantly slowed the progression from HIV to AIDS and from AIDS to death, there is still no cure for the disease. This means that the most effective way to curb the HIV/AIDS epidemic is through the prevention of HIV infections, provision of HIV prevention interventions, and improved access to treatment and other services for persons living with HIV/AIDS.

The HIV/AIDS epidemic continues to greatly impact public health in Louisiana and will make growing demands on health and social service systems for many decades. The lifetime medical cost for caring for a person with AIDS is over $100,000, most of which is paid for by the government. Every year, new infections obligate Louisiana to approximately $120 million in future medical costs.

Summary

As of December 31, 2003, there were 15,368 persons reported to be living with HIV/AIDS in Louisiana. In 2002 alone, 995 new AIDS cases were diagnosed and 1,239 new HIV cases were detected and reported.

There are persons living with HIV/AIDS in every parish in Louisiana. New cases of HIV/AIDS were detected in 62 of Louisiana's 64 parishes in 2002. The HIV detection rate among blacks remains disproportionately high. In 2002, 74 percent of newly-detected HIV/AIDS cases and 77 percent of newly-diagnosed AIDS cases were among blacks. The 2002 HIV detection rate for blacks was over six times higher than that of whites.

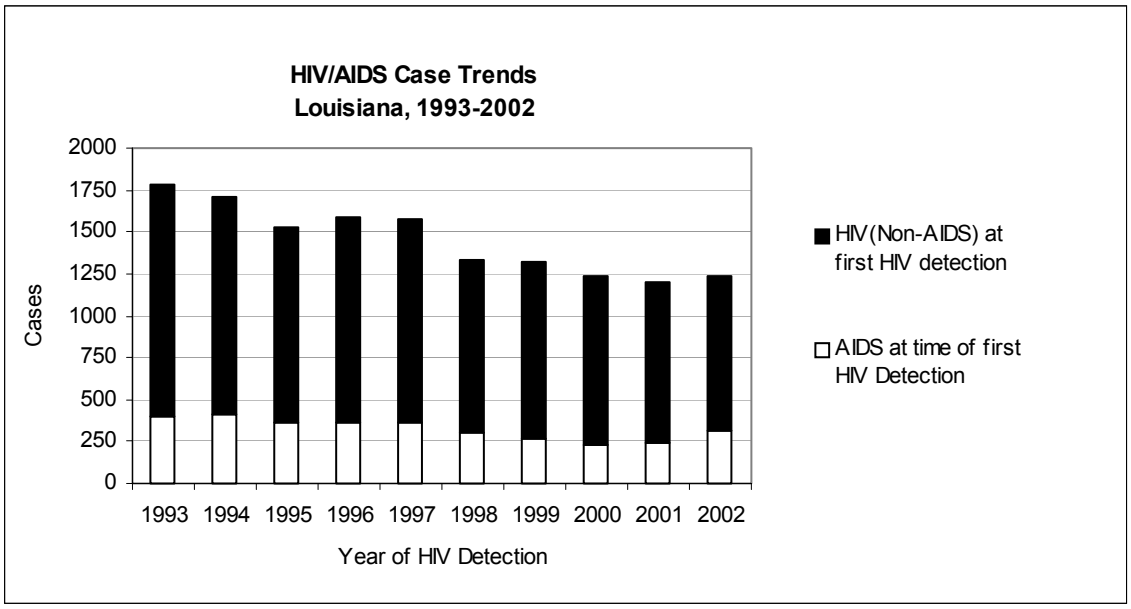
In 2002, the largest proportion of cases detected (43 percent) was attributed to men who have sex with men (MSM), after adjusting for unreported risk. For blacks, high-risk heterosexual activity has remained the leading exposure category, while, among whites, the predominant exposure to HIV is among MSM.

Both new AIDS diagnoses and AIDS-related mortality began to decline dramatically in the mid-1990s, coinciding with the emergence of more effective treatments. However, from 1999 through 2001, the estimated number of deaths among persons with AIDS steadily increased. The number of new AIDS cases increased in 2000 for the first time since the introduction of new drug therapies.

2002 Status

New highly active antiretroviral therapies (HAART) have been shown to be effective in treating HIV infection. These new therapies have delayed the progression from HIV to AIDS and from AIDS to death among many people infected with the virus. However, due to factors such as late testing, limited access to or use of health care services, and limitations of current therapies for some people, AIDS cases are increasing.

In the year 2002, Louisiana ranked fifth highest in reported AIDS case rates nationwide, an increase from eighth in the year 2001. The state ranked tenth in the number of new AIDS cases reported in the United States for the year 2002, up from thirteenth in the previous year. Louisiana's AIDS case rate continues to be higher than the rates of neighboring states.



Source: Louisiana Department of Health and Hospitals, Office of Public Health, HIV/AIDS Program

AIDS Cases and Rates
Louisiana, Neighboring States, and United States, 2000-2002

State	2000		2001		2002		Cumulative Totals*		
	Cases	Rate / 100,000	Cases	Rate / 100,000	Cases	Rate / 100,000	Adults	Children less than 13	Total
Alabama	483	10.9	437	9.8	432	9.6	7,059	76	7,135
Arkansas	194	7.3	197	7.3	240	8.9	3,355	38	3,393
Louisiana	679	15.2	850	19.0	1,167	26.0	14,494	130	14,624
Mississippi	431	15.2	416	14.5	433	15.1	5,236	57	5,293
Texas	2,667	12.8	2,857	13.4	3,140	14.4	59,380	392	59,772
United States	40,307	14.3	42,736	14.8	43,950	15.0	849,780	9,220	859,000

Source: CDC HIV/AIDS Surveillance Report (Vol. 13, No. 2) and (Vol. 14, No. 1)

*The cumulative total includes all cases of AIDS reported to the health departments from 1984 (when AIDS became reportable) through December 31, 2002.

The New Orleans area had the highest number of HIV/AIDS cases detected in 2002. However, that same year as in past years, the Baton Rouge area surpassed the New Orleans area in HIV/AIDS detection rates (number of cases per population in the region). Among the large cities in the nation, the Baton Rouge metropolitan area tied with Miami, Florida for ranking as the location with the second highest AIDS case rates in 2002, while the New Orleans metropolitan area ranked seventh.

Persons Living with HIV/AIDS

The number of persons living with HIV/AIDS continues to increase in Louisiana each year. In 2003, 15,368 persons in Louisiana were known to be living with HIV/AIDS. These numbers reflect only those persons who were confidentially tested and reported to the state Department of Health and Hospitals, and should be considered a minimum estimate of the total number of persons infected with HIV in Louisiana. As the number of persons living with HIV continues to increase, more resources will need to be directed toward programs and services that address primary and secondary prevention, early detection, and effective treatment.

Currently, there are persons living with HIV/AIDS in every parish in Louisiana. As of the end of 2003, 14 parishes out of 64 (22 percent) had greater than 300 persons living with HIV per 100,000 persons living in the parish. The HIV/AIDS Program has funded community-based organizations in every region of the state to deliver HIV prevention programs to persons at high-risk and to provide services for persons living with HIV/AIDS.

Persons Living with HIV/AIDS by Parish Louisiana, 2003			
Parish	Persons Living with HIV/AIDS	Parish	Persons Living with HIV/AIDS
Statewide	15,368	Region VI	**683**
		Avoyelles	157
Region I	**6,762**	Catahoula	25
Jefferson	1,233	Concordia	29
Orleans	5,392	Grant	22
Plaquemines	25	LaSalle	9
St. Bernard	112	Rapides	316
		Vernon	55
Region II	**3239**	Winn	70
Ascension	101		
East Baton Rouge	2,481	Region VII	**1060**
East Feliciana	110	Bienville	19
Iberville	268	Bossier	120
Pointe Coupee	39	Caddo	700
West Baton Rouge	80	Claiborne	74
West Feliciana	160	Desoto	34
		Natchitoches	54
Region III	**462**	Red River	6
Assumption	19	Sabine	18
Lafourche	70	Webster	35
St. Charles	62		
St. James	42	Region VIII	**723**
St. John the Baptist	63	Caldwell	6
St. Mary	60	East Carroll	32
Terrebonne	146	Franklin	11
		Jackson	13
Region IV	**967**	Lincoln	47
Acadia	66	Madison	49
Evangeline	40	Morehouse	40
Iberia	76	Ouachita	413
Lafayette	475	Richland	52
St. Landry	176	Tensas	26
St. Martin	70	Union	23
Vermilion	64	West Carroll	11
Region V	**783**	Region IX	**689**
Allen	191	Livingston	102
Beauregard	44	St. Helena	8
Calcasieu	494	St. Tammany	246
Cameron	****	Tangipahoa	171
Jefferson Davis	50	Washington	162

**** Cells suppressed to protect confidentiality.
Source: Louisiana Department of Health and Hospitals, Office of Public Health, HIV/AIDS Program

Shifts in the Epidemic

In keeping with national trends, Louisiana has seen a shift over the last decade in the HIV/AIDS epidemic, with an increasing proportion of cases among women, minorities, and high-risk heterosexuals. The percentage of persons in the state living with HIV/AIDS who likely contracted their infection through heterosexual contact increased from 12 percent in 1993 to an estimated 21 percent in 2003.

Blacks continue to be disproportionately impacted by HIV/AIDS. In 2002, 74 percent of newly-detected HIV/AIDS cases in Louisiana were among blacks, who comprise only 32 percent of the total state population. The 2002 HIV detection rate among blacks was over six times higher than the rate among whites, and three and a half times higher than the rate among Hispanics.

The percentage of women in Louisiana living with HIV/AIDS increased from 11.3 percent in 1990 to 28 percent in 2003. Furthermore, the percentage of newly-detected HIV/AIDS cases reported among women in the state has been increasing steadily. In 1993, 21 percent of all newly-detected cases were women; this percentage increased to 31 percent in 2002. Black women accounted for 85 percent of all new HIV/AIDS cases among women in 2002.

Newly-detected HIV/AIDS Cases, by Demographics and Exposure Group

Louisiana, 1995-2002

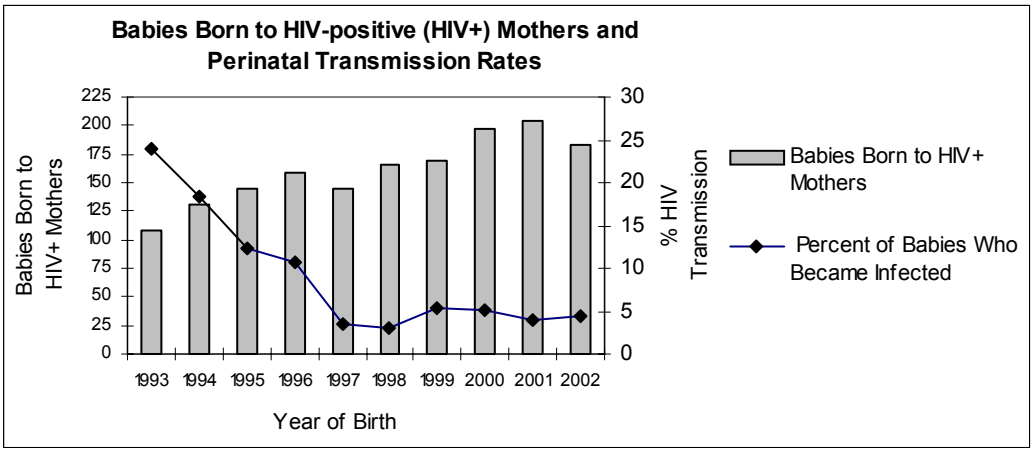
	1995	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*
Total Cases	1,476	1,570	1,544	1,324	1,315	1,238	1,204	1,239
Sex								
Male	1,096	1,116	1,086	912	931	843	779	856
Female	380	454	458	412	384	395	425	383
Race								
Black	1,025	1,099	1,088	960	964	896	876	915
White	419	428	414	327	314	309	285	294
Other	28	42	37	36	34	32	37	25
Unknown	4	1	5	1	3	1	6	5
Exposure Group								
Cases with Specified Risk	1099	1058	966	812	696	637	577	632
*MSM**	38%	39%	38%	41%	41%	44%	45%	49%
*IDU**	28%	28%	27%	26%	25%	21%	20%	20%
*HRH**	22%	22%	25%	26%	24%	26%	27%	25%
*Transf/Hemo**	2%	1%	1%	2%	2%	2%	0%	1%
Perinatal	2%	2%	2%	1%	1%	2%	2%	2%

* MSM: Men who have Sex with Men; IDU: Injection Drug Users (non-MSM); HRH: High Risk Heterosexual; Transf/Hemo: Transfusion/Transplant/Hemophiliac

Source: Louisiana Department of Health and Hospitals, Office of Public Health, HIV/AIDS Program

Perinatal HIV Transmission

Despite the increasing number of women infected with HIV, the percentage of pediatric HIV/AIDS cases (children diagnosed when younger than 13 years of age) has been decreasing in recent years. Perinatal transmission rates dropped dramatically from 24 percent of all births to HIV infected mothers in 1993 to less than 5 percent in 2002. However, perinatal transmission rates remain higher in Louisiana than in other southern states that collect these data. This decline is credited to greater screening for HIV as a part of prenatal care, improved treatment protocols for HIV-infected pregnant women, and increased use of antiretroviral therapy during pregnancy, delivery, and for the exposed infants. The OPH HIV/AIDS Program Perinatal Prevention Program continues to work with medical centers and providers around the state to reinforce the importance of offering HIV counseling and testing to all pregnant women, to encourage early diagnosis and treatment for HIV-infected pregnant women, and to promote appropriate testing and treatment of exposed children.



Source: Louisiana Department of Health and Hospitals, Office of Public Health, HIV/AIDS Program

E. CANCER

1997-2001 Status

According to the American Cancer Society, one in every four deaths in the United States is attributable to cancer. Although more people are surviving cancer now than ever before, this trend is not true for all groups. Survival rates vary according to race, age group, and type of cancer.

Five Most Common Cancers
Louisiana, 1997-2001
(Five-Year Case Counts - Invasive Cases Only)

Type	*Number of Cases*
All Cancers	99,294
Lung	16,898
Prostate	15,205
Breast	14,341
Colon & Rectum	12,168
Non-Hodgkin's Lymphoma	3,729

Source: Louisiana Tumor Registry

Cancer presents in different forms and is associated with a variety of risk factors. Several prevalent forms of cancer can be either prevented or diagnosed early enough to prevent spread to other organs.
Preventive measures can significantly reduce the risk of many cancers. The National Cancer Institute estimates that tobacco use accounts for 30 percent of cancer deaths with dietary factors and sedentary lifestyle accounting for another 35 percent. Most cases of lung cancer can be prevented by not smoking, while consuming a diet low in fat and high in fiber may help prevent colon, rectal, breast, prostate, and other cancers.

Early detection is also important in lowering the rate of deaths due to cancer. Mammography, clinical breast examination, Papanicolaou (Pap) tests, fecal occult blood tests, and proctosigmoidoscopy (colon exam with lighted scope) aid in early detection and treatment of cancers in their early stages. These procedures have been proven to prevent the spread of existing cancers. Nonetheless, a significant portion of the population at risk for various cancers fails to participate in screening procedures.[2]

[2] *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. United States Department of Health and Human Services. Washington: GPO, 1990.

Five Most Common Cancers In Males, Louisiana 1997-2001					
Whites		Blacks		Total *	
Type	Rate**	Type	Rate**	Type	Number
All Cancers	594.3	All Cancers	673.5	All Cancers	52,732
Prostate	158.3	Prostate	229.2	Prostate	15,205
Lung	111.5	Lung	138.3	Lung	10,328
Colon & Rectum	72.5	Colon & Rectum	77.8	Colon & Rectum	6,344
Bladder	38.6	Stomach	20.5	Non-Hodgkin's Lymphoma	1,902
Non-Hodgkin's Lymphoma	23.3	Kidney & Renal Pelvis	20.1	Kidney & Renal Pelvis	1,813

* All races combined. In situ cases are excluded. Case counts cover five years.

** Average annual age-adjusted (2000 U.S.) incidence rates per 100,000 population

Source: Louisiana Tumor Registry.

Five Most Common Cancers In Females, Louisiana 1997-2001					
Whites		Blacks		Total *	
Type	Rate**	Type	Rate**	Type	Number
All Cancers	408.1	All Cancers	390.2	All Cancers	46,562
Breast	126.0	Breast	116.0	Breast	14,178
Lung	58.5	Colon & Rectum	54.6	Lung	6,570
Colon & Rectum	47.3	Lung	49.0	Colon & Rectum	5,824
Non-Hodgkin's Lymphoma	17.5	Corpus Uteri	17.2	Corpus Uteri	1,947
Corpus Uteri	17.0	Cervix Uteri	15.5	Non-Hodgkin's lymphoma	1,827

* All races combined. In situ cases are excluded. Case counts cover five years.

** Average annual age-adjusted (2000 U.S.) incidence rates per 100,000 population.

Source: Louisiana Tumor Registry

Background [3]

Breast cancer is the most frequently occurring invasive cancer among women in the United States and is second only to lung cancer in cancer-related deaths. Nationwide, the death rate from breast cancer decreased significantly during the 1990s, with the largest declines among younger women. Certain factors, such as family history, exposure to hormones, reproductive issues, and excessive alcohol use, can influence the risk for breast cancer. The association between the intake of diets high in fat and increased breast cancer incidence has not been firmly established. It has recently been discovered that alterations in two genes can account for most inherited breast cancer, which constitutes 5 percent of all breast cancers. Early detection improves the chances of survival, and the National Cancer Institute recommended in 1997 that women in their forties or older undergo screening mammograms on a regular

[3] From National Cancer Institute (NCI) and American Cancer Society resources and publications. Statistics quoted pertain to the United States.

basis every year. Women who are at increased risk for breast cancer should seek medical advice about when to begin having mammograms, and how often to be screened.

Cervical (cervix uteri) cancer afflicts 10,500 women each year. Increased use of the Pap test has contributed to an almost 50 percent drop in cervical cancer deaths since 1973. Women who are, or have been sexually active or have reached age 18 should have Pap tests and physical examinations regularly.

Colorectal cancer was the second leading cause of cancer deaths in the years 1995-1999, although both incidence and mortality rates have been declining. Studies have shown that lifestyle factors may cause colon and rectum cancers. A diet high in fruits, vegetables and fiber, and low in fat, appears to reduce the risk of colorectal cancer. Increased physical activity may also lower the risk for this type of cancer. Research suggests that increased screening and polyp removal has contributed to the reduction in the impact of this disease.

Kidney cancer, according to the American Cancer Society, will account for almost 3 percent of all new cancers detected in 2004 the United States. Obesity, cigarette smoking, and abuse of analgesics have been linked to increased risk for this disease; on the other hand, beverages such as coffee, tea, and alcoholic drinks have not been found to be important risk factors. About one third of renal cell cancers and more than one half of renal pelvis and ureteric cancers could be avoided by eliminating the use of tobacco.

Leukemias together will account for 2.5 percent of the 2004 cancer incidence in the United States and almost one third of cancers in children. Five main types (and an increasing number of subtypes) have been identified. Rates for all types of leukemia are higher among males than among females; for most leukemias, rates are higher among whites than blacks.

Lung cancer is the largest single cause of cancer mortality in the United States. It is difficult to detect and hard to treat. In the period between 1996 and 2001, lung cancer caused approximately 30 percent of all cancer deaths. Smoking is responsible for 85 percent of lung cancers. The risk of dying as a result of lung cancer is 22 times higher for male smokers and 12 times higher for female smokers than for people who have never smoked. Smoking rates rose significantly among high school students from 1991 to 1997 but have been declining since then.

Melanoma of the skin incidence rates have increased steadily over the last several decades. This form of skin cancer was responsible for about 75 percent of all skin cancer deaths 1997-2001. Earlier diagnoses of melanoma of the skin have increased survival rates, but the total mortality rate continues to rise gradually with the increase in incidence. Risk factors include excessive exposure to ultraviolet radiation, occupational exposures, family history, and multiple or atypical moles.

Non-Hodgkin's lymphoma cases increased dramatically in the 1970s and 1980s, but the rate stabilized in the 1990s. Part of this increase is due to AIDS-related cases. Among the risk factors are reduced

immune function and exposure to certain infectious agents. Occupational exposures to certain chemicals are also suspected.

Cancer of the oral cavity and the pharynx accounted for approximately 2.5 percent of all malignancies in 1996 to 2001. In the United States, oral cancer is two to three times more common among males than females. Tobacco use and alcohol consumption account for approximately three fourths of all oral cancers in the United States. Epidemiological evidence indicates that, while smoking and drinking are independent risk factors, their combination increases the risk of cancer. Use of snuff is a primary cause of cancers of the gum and cheek. Although not as prevalent as cigarette smoking, habitual use of pipes, cigars, and smokeless tobacco is associated with relative risks as great as that for cigarette smoking.

Ovarian cancer strikes almost 26,000 women every year. Currently, the five-year survival rate is approximately 50 percent. Reproductive history, family history, and use of oral contraceptives have been linked to the incidence of ovarian cancer. As is the case for almost all cancers, the risk increases with age.

Pancreatic cancer is called a “silent” disease, as it is asymptomatic until well advanced. Survival is considered poor since only about 5 percent of patients are alive five years after diagnosis. In the period from 1997 through 2001, it ranked eleventh in incidence among all cancers in the United States, but was fifth in cancer mortality. Little is known about the etiology of pancreatic cancer, and the only established risk factor is cigarette smoking.

Prostate cancer is the most frequently diagnosed invasive cancer in men but is a distant second to lung cancer as a cause of death. Increasingly, evidence points to diet, particularly animal fat, in prostate cancer development. Hormones are also being investigated, as well as occupational and other lifestyle factors. The National Cancer Institute (NCI) is currently conducting a study to determine whether regular screening with a digital rectal exam and a blood test for prostate-specific antigen (PSA) reduces mortality.

Urinary bladder cancer was the fourth most common type of cancer in the five-year period from 1997 to 2001 among men and the tenth most common among women in the United States. It is especially prevalent among older white men. Since the late 1980s, incidence and mortality rates have generally leveled off. The most important known risk factor is cigarette smoking. smokers demonstrate two to three times the risk for urinary bladder cancer as non-smokers. Several occupational exposures like those involved in rubber, chemical, textile, metal, and leather industries also increase the risk for bladder cancer. Occupational risk factors include recurrent and early exposure to hair dye, and exposure to dye containing aniline, a chemical used in medical and industrial dyes. Despite previous speculation, research shows that neither artificial sweeteners nor coffee drinking appears to increase the risk of cancer.

Uterine (corpus uteri) cancer, the fourth most common cancer in women in the United States, accounted for approximately 6 percent of all cancer cases in women from 1997 through 2001. However, a limited number of deaths result from this disease, as reflected in a high five-year survival rate of 85 percent. High cumulative exposure to estrogen is the major risk factor for the most common type of cancer of the uterine corpus; low parity and obesity are also linked to this disease.

Note on Statistics

In the following tables describing cancer incidence in Louisiana, disease counts encompass a five-year period. This evens out natural fluctuations in cancer incidence and allows a more reliable identification of the cancers that are of most concern in Louisiana. Only invasive cases are included in the following counts (i.e., *in situ* cases are excluded). Data come from the Louisiana Tumor Registry.

Top Five Cancers and Number of Cases Diagnosed by Region and Parish
Louisiana, 1997-2001
Five-Year Case Counts - Invasive Cases Only

Region / Parish	Total		Males		Females	
State Total	All Cancers	99,294	All Cancers	52,732	All Cancers	46,562
	Lung	16,898	Prostate	15,205	Breast	14,178
	Prostate	15,205	Lung	10,328	Lung	6,570
	Breast	14,341	Colon & Rectum	6,344	Colon & Rectum	5,824
	Colon & Rectum	12,168	Non-Hodgkin's Lymphoma	1,902	Corpus Uteri	1,947
	Non-Hodgkin's Lymphoma	3,729	Kidney	1,813	Non-Hodgkin's Lymphoma	1,827
Region 1	All Cancers	24,019	All Cancers	12,395	All Cancers	11,624
	Lung	4,184	Prostate	3,373	Breast	3,542
	Breast	3,592	Lung	2,457	Lung	1,727
	Prostate	3,373	Colon & Rectum	1,480	Colon & Rectum	1,475
	Colon & Rectum	2,955	Non-Hodgkin's Lymphoma	483	Corpus Uteri	456
	Non-Hodgkin's Lymphoma	891	Bladder	476	Non-Hodgkin's Lymphoma	408
Jefferson	All Cancers	10,495	All Cancers	5,339	All Cancers	5,156
	Lung	1,833	Prostate	1,380	Breast	1,570
	Breast	1,589	Lung	1,051	Lung	782
	Prostate	1,380	Colon & Rectum	660	Colon & Rectum	640
	Colon & Rectum	1,300	Non-Hodgkin's Lymphoma	240	Corpus Uteri	202
	Non-Hodgkin's Lymphoma	439	Oral Cavity & Pharynx	203	Non-Hodgkin's Lymphoma	199
Orleans	All Cancers	11,200	All Cancers	5,860	All Cancers	5,340
	Lung	1,858	Prostate	1,727	Breast	1,663
	Prostate	1,727	Lung	1,125	Lung	733
	Breast	1,689	Colon & Rectum	675	Colon & Rectum	704
	Colon & Rectum	1,379	Bladder	205	Corpus Uteri	212
	Non-Hodgkin's Lymphoma	365	Non-Hodgkin's Lymphoma	201	Non-Hodgkin's Lymphoma	164
Plaquemines	All Cancers	551	All Cancers	286	All Cancers	265
	Lung	98	Prostate	69	Breast	79
	Breast	81	Lung	58	Lung	40
	Prostate	69	Colon & Rectum	25	Colon & Rectum	30
	Colon & Rectum	55	Bladder	19	Pancreas /Non-Hodgkin's Lymphoma/ Skin Melanomas	9º
	Bladder	26	Kidney and Renal Pelvis	15	Ovary	8

Top Five Cancers and Number of Cases Diagnosed by Region and Parish
Louisiana, 1997-2001
Five-Year Case Counts - Invasive Cases Only

Region / Parish	Total		Males		Females	
St. Bernard	All Cancers	1,773	All Cancers	910	All Cancers	863
	Lung	395	Lung	223	Breast	230
	Breast	233	Prostate	197	Lung	172
	Colon & Rectum	221	Colon & Rectum	120	Colon & Rectum	101
	Prostate	197	Bladder	54	Non-Hodgkin's Lymphoma / Corpus Uteri	36º
	Bladder	71	Non-Hodgkin's Lymphoma	33	Ovary	30
Region 2	All Cancers	12,059	All Cancers	6,387	All Cancers	5,672
	Prostate	2,045	Prostate	2,045	Breast	1,838
	Breast	1,857	Lung	1,115	Lung	710
	Lung	1,825	Colon & Rectum	751	Colon & Rectum	697
	Colon & Rectum	1,448	Kidney	245	Corpus Uteri	250
	Non-Hodgkin's Lymphoma	429	Oral Cavity & Pharynx	208	Non-Hodgkin's Lymphoma	223
Ascension	All Cancers	1,285	All Cancers	688	All Cancers	597
	Lung	226	Prostate	213	Breast	213
	Breast	214	Lung	131	Lung	95
	Prostate	213	Colon & Rectum	74	Colon & Rectum	56
	Colon & Rectum	130	Oral Cavity & Pharynx	32	Corpus Uteri	24
	Non-Hodgkin's Lymphoma	42	Kidney & Renal Pelvis	28	Ovary	22
East Baton Rouge	All Cancers	8,216	All Cancers	4,225	All Cancers	3,991
	Prostate	1,416	Prostate	1,416	Breast	1,273
	Breast	1,288	Lung	684	Colon & Rectum	500
	Lung	1,176	Colon & Rectum	499	Lung	492
	Colon & Rectum	999	Kidney & Renal Pelvis	166	Corpus Uteri	170
	Non-Hodgkin's Lymphoma	299	Non-Hodgkin's Lymphoma	136	Non-Hodgkin's Lymphoma	163
East Feliciana	All Cancers	512	All Cancers	296	All Cancers	216
	Prostate	97	Prostate	97	Breast	69
	Lung	79	Lung	58	Colon & Rectum	34
	Colon & Rectum	72	Colon & Rectum	38	Lung	21
	Breast	69	Bladder / Oral Cavity & Pharynx	11º	Corpus Uteri	14
	Leukemia	16	Leukemia	10	Thyroid / Non-Hodgkin's Lymphoma	9º
Iberville	All Cancers	738	All Cancers	416	All Cancers	322
	Prostate / Lung	120º	Prostate	120	Breast	100
	Breast	100	Lung	81	Lung	39
	Colon & Rectum	75	Colon & Rectum	39	Colon & Rectum	36
	Non-Hodgkin's Lymphoma / Kidney & Renal Pelvis	29º	Kidney & Renal Pelvis	19	Cervix Uteri	18
	Oral Cavity & Pharynx	25	Non-Hodgkin's Lymphoma	17	Corpus Uteri	13
Pointe Coupee	All Cancers	549	All Cancers	312	All Cancers	237
	Lung	86	Prostate	76	Breast	71
	Colon & Rectum	83	Lung	59	Colon & Rectum	34
	Prostate	76	Colon & Rectum	49	Lung	27
	Breast	72	Bladder	15	Pancreas	14
	Non-Hodgkin's Lymphoma	21	Non-Hodgkin's Lymphoma	14	Corpus Uteri	13

Top Five Cancers and Number of Cases Diagnosed by Region and Parish
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Region / Parish	Total		Males		Females	
West Baton Rouge	All Cancers	506	All Cancers	278	All Cancers	228
	Breast	86	Prostate	75	Breast	85
	Lung	82	Lung	59	Colon & Rectum	24
	Prostate	75	Colon & Rectum	34	Lung	23
	Colon & Rectum	58	Stomach	12	Corpus Uteri	15
	Non-Hodgkin's Lymphoma	17	Non-Hodgkin's Lymphoma	9	Non-Hodgkin's Lymphoma /	8º
West Feliciana	All Cancers	253	All Cancers	172	All Cancers	81
	Lung	56	Prostate	48	Breast	****
	Prostate	48	Lung	43	Lung / Colon & Rectum	****º
	Colon & Rectum	31	Colon & Rectum	18	Cervix	****
	Breast	28	Oral Cavity & Pharynx	7	Brain / Non-Hodgkin's	****º
	Oral Cavity & Pharynx	9	Skin Melanomas	6		
Region 3	All Cancers	7,152	All Cancers	3,905	All Cancers	3,247
	Lung	1,270	Prostate	1,019	Breast	1,067
	Breast	1,080	Lung	829	Lung	441
	Prostate	1,019	Colon & Rectum	497	Colon & Rectum	438
	Colon & Rectum	935	Bladder	157	Corpus Uteri	149
	Non-Hodgkin's Lymphoma	293	Kidney & Renal Pelvis	154	Non-Hodgkin's Lymphoma	145
Assumption	All Cancers	472	All Cancers	260	All Cancers	212
	Lung	88	Lung	67	Breast	66
	Breast	67	Prostate	57	Colon & Rectum	24
	Prostate / Colon & Rectum	57º	Colon & Rectum	33	Lung	21
	Kidney & Renal Pelvis	21	Larynx / Kidney & Renal	10º	Kidney & Renal Pelvis	11
	Non-Hodgkin's Lymphoma	17	Non-Hodgkin's Lymphoma /	9º	Ovary / Non-Hodgkin's	8º
Lafourche	All Cancers	1,693	All Cancers	914	All Cancers	779
	Lung	265	Prostate	226	Breast	247
	Breast	251	Lung	171	Colon & Rectum	119
	Colon & Rectum	244	Colon & Rectum	125	Lung	94
	Prostate	226	Bladder	39	Corpus Uteri	39
	Non-Hodgkin's Lymphoma	65	Non-Hodgkin's Lymphoma	34	Kidney & Renal Pelvis	32
St. Charles	All Cancers	874	All Cancers	477	All Cancers	397
	Prostate	148	Prostate	148	Breast	133
	Lung / Breast	133º	Lung	78	Lung	55
	Colon & Rectum	94	Colon & Rectum	56	Colon & Rectum	38
	Non-Hodgkin's Lymphoma	31	Bladder	22	Ovary	16
	Bladder	25	Stomach	17	Non-Hodgkin's Lymphoma /	15º
St. James	All Cancers	429	All Cancers	237	All Cancers	192
	Lung	69	Prostate	64	Breast	59
	Prostate	64	Lung	48	Colon & Rectum	33
	Colon & Rectum	63	Colon & Rectum	30	Lung	21
	Breast	60	Kidney & Renal Pelvis /	11º	Kidney & Renal Pelvis	8
	Kidney & Renal Pelvis	19	Pancreas	10	Corpus Uteri / Pancreas	7º
St. John the Baptist	All Cancers	730	All Cancers	377	All Cancers	353
	Breast	120	Prostate	115	Breast	119
	Prostate	115	Lung	62	Lung	47
	Lung	109	Colon & Rectum	40	Colon & Rectum	44
	Colon & Rectum	84	Bladder	20	Non-Hodgkin's Lymphoma	19
	Non-Hodgkin's Lymphoma	33	Kidney & Renal Pelvis	16	Corpus Uteri	18

Top Five Cancers and Number of Cases Diagnosed by Region and Parish
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Region / Parish	Total		Males		Females	
St. Mary	All Cancers	1,171	All Cancers	654	All Cancers	517
	Lung	240	Lung	161	Breast	158
	Breast	160	Prostate	159	Lung	79
	Prostate	159	Colon & Rectum	74	Colon & Rectum	56
	Colon & Rectum	130	Oral Cavity & Pharynx	29	Ovary	24
	Non-Hodgkin's Lymphoma	49	Non-Hodgkin's Lymphoma	28	Corpus Uteri / Non-Hodgkin's Lymphoma	21º
Terrebonne	All Cancers	1,967	All Cancers	1,063	All Cancers	904
	Lung	366	Prostate	250	Breast	285
	Colon & Rectum	289	Lung	242	Colon & Rectum / Lung	124º
	Breast	263	Colon & Rectum	139	Corpus Uteri	51
	Prostate	250	Kidney & Renal Pelvis	50	Non-Hodgkin's Lymphoma	46
	Non-Hodgkin's Lymphoma	89	Oral Cavity & Pharynx	44	Ovary	28
Region 4	All Cancers	11,875	All Cancers	6,322	All Cancers	5,553
	Lung	2,085	Prostate	1,869	Breast	1,686
	Prostate	1,869	Lung	1,246	Lung	839
	Breast	1,704	Colon & Rectum	814	Colon & Rectum	627
	Colon & Rectum	1,441	Kidney & Renal Pelvis	235	Non-Hodgkin's Lymphoma	248
	Non-Hodgkin's Lymphoma	467	Non-Hodgkin's Lymphoma	219	Corpus Uteri	231
Acadia	All Cancers	1,464	All Cancers	764	All Cancers	700
	Lung	263	Prostate	205	Breast	187
	Colon & Rectum	208	Lung	148	Lung	115
	Prostate	205	Colon & Rectum	119	Colon & Rectum	89
	Breast	190	Oral Cavity & Pharynx	28	Non-Hodgkin's Lymphoma	36
	Non-Hodgkin's Lymphoma	61	Kidney & Renal Pelvis	25	Corpus Uteri	33
Evangeline	All Cancers	802	All Cancers	411	All Cancers	391
	Lung	171	Prostate	98	Breast	93
	Colon & Rectum	106	Lung	97	Lung	74
	Prostate	98	Colon & Rectum	59	Colon & Rectum	47
	Breast	94	Kidney & Renal Pelvis	19	Non-Hodgkin's Lymphoma	21
	Non-Hodgkin's Lymphoma	36	Non-Hodgkin's Lymphoma / Oral Cavity & Pharynx	15º	Pancreas	17
Iberia	All Cancers	1,600	All Cancers	874	All Cancers	726
	Lung	261	Prostate	235	Breast	224
	Prostate	235	Lung	165	Lung	96
	Breast	230	Colon & Rectum	109	Colon & Rectum	84
	Colon & Rectum	193	Kidney & Renal Pelvis	40	Corpus Uteri	34
	Kidney & Renal Pelvis	61	Oral Cavity & Pharynx	34	Non-Hodgkin's Lymphoma	26
Lafayette	All Cancers	3,808	All Cancers	1,951	All Cancers	1,857
	Breast	621	Prostate	555	Breast	619
	Lung	601	Lung	348	Lung	253
	Prostate	555	Colon & Rectum	245	Colon & Rectum	182
	Colon & Rectum	427	Non-Hodgkin's Lymphoma / Skin Melanomas	73º	Non-Hodgkin's Lymphoma	81
	Non-Hodgkin's Lymphoma	154	Kidney & Renal Pelvis	70	Corpus Uteri	75

Top Five Cancers and Number of Cases Diagnosed by Region and Parish
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Region / Parish	Total		Males		Females	
St. Landry	All Cancers	2,114	All Cancers	1,144	All Cancers	970
	Lung	384	Prostate	323	Breast	286
	Prostate	323	Lung	230	Lung	154
	Breast	291	Colon & Rectum	144	Colon & Rectum	108
	Colon & Rectum	252	Kidney & Renal Pelvis	39	Pancreas	47
	Pancreas	84	Pancreas / Bladder	37º	Non-Hodgkin's Lymphoma	37
St. Martin	All Cancers	995	All Cancers	579	All Cancers	416
	Prostate	192	Prostate	192	Breast	118
	Lung	189	Lung	131	Lung	58
	Breast	118	Colon & Rectum	58	Colon & Rectum	54
	Colon & Rectum	112	Pancreas	22	Corpus Uteri	20
	Pancreas	35	Larynx / Oral Cavity & Pharynx	19º	Cervix Uteri	17
Vermilion	All Cancers	1,350	All Cancers	753	All Cancers	597
	Prostate	261	Prostate	261	Breast	159
	Lung	216	Lung	127	Lung	89
	Breast	160	Colon & Rectum	80	Colon & Rectum	63
	Colon & Rectum	143	Non-Hodgkin's Lymphoma	25	Non-Hodgkin's Lymphoma	31
	Non-Hodgkin's Lymphoma	56	Kidney & Renal Pelvis / Bladder	24º	Skin Melanomas	27
Region 5	All Cancers	6,691	All Cancers	3,635	All Cancers	3,056
	Prostate	1,113	Prostate	1,113	Breast	932
	Lung	1,097	Lung	693	Lung	404
	Breast	937	Colon & Rectum	387	Colon & Rectum	384
	Colon & Rectum	771	Non-Hodgkin's Lymphoma	170	Non-Hodgkin's Lymphoma	144
	Non-Hodgkin's Lymphoma	314	Bladder	138	Corpus Uteri	124
Allen	All Cancers	499	All Cancers	269	All Cancers	230
	Lung	91	Prostate	73	Breast	65
	Prostate	73	Lung	64	Colon & Rectum	35
	Breast / Colon & Rectum	65º	Colon & Rectum	30	Lung	27
	Non-Hodgkin's Lymphoma	26	Non-Hodgkin's Lymphoma	14	Non-Hodgkin's Lymphoma	12
	Pancreas	17	Kidney & Renal Pelvis / Leukemias	10º	Pancreas	10
Beauregard	All Cancers	760	All Cancers	422	All Cancers	338
	Lung	131	Prostate	129	Breast	97
	Prostate	129	Lung	87	Lung	44
	Breast	98	Colon & Rectum	47	Colon & Rectum	41
	Colon & Rectum	88	Bladder	31	Corpus Uteri	16
	Bladder	39	Non-Hodgkin's Lymphoma	19	Skin Melanomas	13
Calcasieu	All Cancers	4,562	All Cancers	2,478	All Cancers	2,084
	Prostate	766	Prostate	766	Breast	647
	Lung	718	Lung	444	Colon & Rectum	275
	Breast	649	Colon & Rectum	266	Lung	274
	Colon & Rectum	541	Non-Hodgkin's Lymphoma	117	Non-Hodgkin's Lymphoma	103
	Non-Hodgkin's Lymphoma	220	Bladder	86	Corpus Uteri	82

Top Five Cancers and Number of Cases Diagnosed by Region and Parish

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Region / Parish	Total		Males		Females	
Cameron	All Cancers	179	All Cancers	88	All Cancers	91
	Lung	35	Prostate	****	Breast	****
	Breast	25	Lung	****	Lung	****
	Prostate	23	Colon & Rectum	****	Colon & Rectum	****
	Colon & Rectum	22	Non-Hodgkin's Lymphoma / Pancreas	****º	Ovary	****
	Non-Hodgkin's Lymphoma	7	Bladder / Skin Melanoma / Larynx	****º	Cervix Uteri	****
Jefferson Davis	All Cancers	691	All Cancers	378	All Cancers	313
	Lung / Prostate	122	Prostate	122	Breast	100
	Breast	100	Lung	77	Lung	45
	Colon & Rectum	55	Colon & Rectum	34	Colon & Rectum	21
	Non-Hodgkin's Lymphoma	32	Non-Hodgkin's Lymphoma	16	Pancreas	19
	Pancreas	30	Bladder	12	Corpus Uteri	17
Region 6	All Cancers	6,690	All Cancers	3,626	All Cancers	3,064
	Lung	1,254	Prostate	940	Breast	855
	Prostate	940	Lung	797	Lung	457
	Colon & Rectum	912	Colon & Rectum	505	Colon & Rectum	407
	Breast	862	Pancreas	129	Non-Hodgkin's Lymphoma	127
	Non-Hodgkin's Lymphoma	249	Oral Cavity & Pharynx	127	Corpus Uteri	111
Avoyelles	All Cancers	989	All Cancers	531	All Cancers	458
	Lung	183	Lung	115	Breast	123
	Colon & Rectum	159	Prostate	108	Lung	68
	Breast	123	Colon & Rectum	93	Colon & Rectum	66
	Prostate	108	Kidney & Renal Pelvis	31	Non-Hodgkin's Lymphoma	22
	Kidney & Renal pelvis	42	Pancreas	20	Leukemias	18
Catahoula	All Cancers	246	All Cancers	136	All Cancers	110
	Lung	47	Prostate	36	Breast	****
	Prostate	36	Lung	30	Colon & Rectum	****
	Colon & Rectum	35	Colon & Rectum	16	Lung	****
	Breast	28	Pancreas	6	Pancreas /Cervix / Corpus Uteri / Non-Hodgkin's	****º
	Pancreas	10	Non-Hodgkin's Lymphoma / Kidney & Renal Pelvis /Bladder	5º	Leukemias / Ovary / Kidney & Renal Pelvis	****º
Concordia	All Cancers	417	All Cancers	214	All Cancers	203
	Lung	97	Lung	56	Breast	47
	Prostate	51	Prostate	51	Lung	41
	Breast	47	Colon & Rectum	27	Colon & Rectum	19
	Colon & Rectum	45	Pancreas	13	Ovary	13
	Pancreas	25	Leukemias / Stomach / Esophagus	7º	Pancreas	12
Grant	All Cancers	403	All Cancers	220	All Cancers	183
	Lung	92	Lung	57	Breast	56
	Breast	56	Prostate	53	Lung	35
	Prostate	53	Colon & Rectum	20	Colon & Rectum	28
	Colon & Rectum	48	Oral Cavity & Pharynx	12	Pancreas	7
	Oral Cavity & Pharynx	16	Non-Hodgkin's Lymphoma	10	Kidney & Renal pelvis / Thyroid / Corpus uteri / Non-Hodgkin's Lymphoma	5º

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Region / Parish	Total		Males		Females	
La Salle	All Cancers	399	All Cancers	212	All Cancers	187
	Prostate	68	Prostate	68	Breast	47
	Lung	66	Lung	43	Colon & Rectum	29
	Colon & Rectum	56	Colon & Rectum	27	Lung	23
	Breast	47	Bladder	10	Corpus Uteri	10
	Bladder	17	Oral Cavity & Pharynx / Larynx / Non-Hodgkin's	6º	Skin Melanoma	8
Rapides	All Cancers	2,958	All Cancers	1,607	All Cancers	1,351
	Lung	512	Prostate	449	Breast	409
	Prostate	449	Lung	319	Lung	193
	Colon & Rectum	418	Colon & Rectum	242	Colon & Rectum	176
	Breast	414	Pancreas	64	Non-Hodgkin's Lymphoma	63
	Non-Hodgkin's Lymphoma	105	Kidney & Renal Pelvis	52	Cervix Uteri	43
Vernon	All Cancers	828	All Cancers	455	All Cancers	373
	Lung	179	Lung	120	Breast	100
	Breast	100	Prostate	97	Lung	59
	Prostate	97	Colon & Rectum	51	Colon & Rectum	35
	Colon & Rectum	86	Non-Hodgkin's Lymphoma	26	Ovary	21
	Oral Cavity & Pharynx / Non-Hodgkin's Lymphoma	37º	Bladder	23	Oral Cavity & Pharynx	16
Winn	All Cancers	450	All Cancers	251	All Cancers	199
	Prostate / Lung	78	Prostate	78	Breast	45
	Colon & Rectum	64	Lung	57	Colon & Rectum	35
	Breast	46	Colon & Rectum	29	Lung	21
	Non-Hodgkin's Lymphoma	19	Oral Cavity & Pharynx	12	Corpus Uteri	11
	Skin Melanoma / Oral Cavity & Pharynx	17º	Non-Hodgkin's Lymphoma	10	Non-Hodgkin's Lymphoma	9
Region 7	All Cancers	12,656	All Cancers	6,808	All Cancers	5,848
	Lung	2,114	Prostate	2,112	Breast	1,715
	Prostate	2,112	Lung	1,313	Lung	801
	Breast	1,798	Colon & Rectum	834	Colon & Rectum	796
	Colon & Rectum	1,630	Oral Cavity & Pharynx	243	Corpus Uteri	266
	Non-Hodgkin's Lymphoma	416	Bladder	227	Ovary	210
Bienville	All Cancers	480	All Cancers	263	All Cancers	217
	Prostate	99	Prostate	99	Breast	66
	Lung	80	Lung	56	Colon & Rectum	31
	Breast	66	Colon & Rectum	32	Lung	24
	Colon & Rectum	60	Non-Hodgkin's Lymphoma	11	Corpus Uteri	9
	Non-Hodgkin's Lymphoma	18	Oral Cavity & Pharynx	7	Ovary	8
Bossier	All Cancers	2,050	All Cancers	1,115	All Cancers	935
	Lung	345	Prostate	311	Breast	277
	Prostate	311	Lung	203	Lung	142
	Breast	282	Colon & Rectum	146	Colon & Rectum	112
	Colon & Rectum	258	Bladder	41	Ovary	47
	Non-Hodgkin's Lymphoma	70	Skin Melanomas	39	Non-Hodgkin's Lymphoma	33

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Region / Parish	Total		Males		Females	
Caddo	All Cancers	6,072	All Cancers	3,168	All Cancers	2,904
	Prostate	1,026	Prostate	1,026	Breast	892
	Lung	968	Lung	594	Colon & Rectum	389
	Breast	901	Colon & Rectum	389	Lung	374
	Colon & Rectum	778	Oral Cavity & Pharynx	116	Corpus Uteri	138
	Non-Hodgkin's Lymphoma	200	Bladder	106	Ovary	101
Claiborne	All Cancers	476	All Cancers	287	All Cancers	189
	Prostate	91	Prostate	91	Breast	69
	Lung	77	Lung	54	Colon & Rectum	28
	Breast	73	Colon & Rectum	25	Lung	23
	Colon & Rectum	53	Oral Cavity & Pharynx	11	Corpus Uteri	10
	Oral Cavity & Pharynx	16	Leukemias / Bladder /	9º	Non-Hodgkin's Lymphoma /	7º
De Soto	All Cancers	670	All Cancers	359	All Cancers	311
	Prostate	124	Prostate	124	Breast	101
	Lung	116	Lung	72	Colon & Rectum	45
	Breast	102	Colon & Rectum	42	Lung	44
	Colon & Rectum	87	Oral Cavity & Pharynx	16	Corpus Uteri	14
	Oral Cavity & Pharynx	22	Bladder	13	Pancreas	13
Natchitoches	All Cancers	805	All Cancers	414	All Cancers	391
	Lung	129	Prostate	120	Breast	117
	Prostate	120	Lung	83	Colon & Rectum	66
	Breast	118	Colon & Rectum	44	Lung	46
	Colon & Rectum	110	Oral Cavity & Pharynx / Non-Hodgkin's Lymphoma	18º	Corpus Uteri	21
	Non-Hodgkin's Lymphoma	29	Bladder / Kidney & Renal Pelvis	15º	Pancreas / Kidney & Renal Pelvis	12º
Red River	All Cancers	221	All Cancers	111	All Cancers	110
	Colon & Rectum	40	Prostate	****	Breast	25
	Prostate / Lung	33º	Lung	****	Colon & Rectum	21
	Breast	25	Colon & Rectum	****	Lung	10
	Corpus Uteri	9	Skin Melanomas / Brain	****º	Corpus Uteri	9
	Skin Melanomas	7	Bladder / Kidney& Renal Pelvis /Oral Cavity&Pharynx	****º	Cervix Uteri	5
Sabine	All Cancers	598	All Cancers	344	All Cancers	254
	Lung	131	Lung	83	Breast	75
	Prostate	79	Prostate	79	Lung	48
	Breast	75	Colon & Rectum	47	Colon & Rectum	22
	Colon & Rectum	69	Bladder	18	Non-Hodgkin's Lymphoma	17
	Non-Hodgkin's Lymphoma	28	Kidney & Renal Pelvis	16	Cervix Uteri / Corpus Uteri	10º
Webster	All Cancers	1,284	All Cancers	747	All Cancers	537
	Lung	235	Prostate	229	Breast	153
	Prostate	229	Lung	145	Lung	90
	Colon & Rectum	175	Colon & Rectum	93	Colon & Rectum	82
	Breast	156	Kidney & Renal Pelvis	27	Corpus Uteri	25
	Kidney & Renal Pelvis	39	Larynx / Non-Hodgkin's Lymphoma	21º	Non-Hodgkin's Lymphoma / Cervix Uteri /Ovary / Skin Melanomas	16º

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Region / Parish	Total		Males		Females	
Region 8	All Cancers	8,406	All Cancers	4,455	All Cancers	3,951
	Lung	1,492	Prostate	1,257	Breast	1,134
	Prostate	1,257	Lung	947	Lung	545
	Breast	1,147	Colon & Rectum	483	Colon & Rectum	495
	Colon & Rectum	978	Oral Cavity & Pharynx	187	Corpus Uteri	195
	Non-Hodgkin's Lymphoma	310	Melanoma of the skin	173	Non-Hodgkin's Lymphoma	169
Caldwell	All Cancers	294	All Cancers	167	All Cancers	127
	Lung	61	Prostate	45	Breast	35
	Prostate	45	Lung	43	Colon & Rectum	24
	Colon & Rectum	41	Colon & Rectum	17	Lung	18
	Breast	35	Oral Cavity & Pharynx	9	Non-Hodgkin's Lymphoma	10
	Non-Hodgkin's Lymphoma	15	Skin Melanomas	8	Pancreas / Multiple Myeloma / Corpus Uteri	5º
East Carroll	All Cancers	209	All Cancers	119	All Cancers	90
	Lung	36	Prostate	35	Breast	****
	Prostate	35	Lung	24	Colon & Rectum	****
	Colon & Rectum	33	Colon & Rectum	20	Lung	****
	Breast	22	Oral Cavity & Pharynx	9	Corpus Uteri / Pancreas	****º
	Oral Cavity & Pharynx	10	Leukemias	6	Thyroid	****
Franklin	All Cancers	549	All Cancers	301	All Cancers	248
	Lung	98	Prostate	96	Breast	60
	Prostate	96	Lung	64	Lung / Colon & Rectum	34º
	Colon & Rectum	70	Colon & Rectum	36	Corpus Uteri	12
	Breast	60	Bladder	12	Pancreas	11
	Non-Hodgkin's Lymphoma	18	Oral Cavity & Pharynx / Non-Hodgkin's Lymphoma	11º	Ovary	9
Jackson	All Cancers	429	All Cancers	229	All Cancers	200
	Lung	85	Prostate	59	Breast	55
	Prostate	59	Lung	56	Lung	29
	Breast	55	Colon & Rectum	26	Colon & Rectum	25
	Colon & Rectum	51	Stomach / Bladder	9º	Cervix Uteri	9
	Skin Melanomas / Pancreas	15º	Oral Cavity & Pharynx / Pancreas	8º	Ovary / Skin Melanomas / Non-Hodgkin's Lymphoma	8º
Lincoln	All Cancers	842	All Cancers	449	All Cancers	393
	Prostate	129	Prostate	129	Breast	124
	Lung	125	Lung	81	Colon & Rectum	46
	Breast	124	Colon & Rectum	53	Lung	44
	Colon & Rectum	99	Skin Melanomas	24	Corpus Uteri	30
	Skin Melanomas	37	Oral Cavity & Pharynx	22	Ovary	17
Madison	All Cancers	226	All Cancers	134	All Cancers	92
	Lung	45	Prostate	42	Breast	****
	Prostate	42	Lung	29	Lung	****
	Colon & Rectum	25	Colon & Rectum	14	Colon & Rectum	****
	Breast	20	Esophagus	8	Cervix Uteri / Bladder	****º
	Esophagus	10	Oral Cavity & Pharynx	6	Corpus Uteri	****

Top Five Cancers and Number of Cases Diagnosed by Region and Parish
Louisiana, 1997-2001
Five-Year Case Counts - Invasive Cases Only

Region / Parish	Total		Males		Females	
Morehouse	All Cancers	849	All Cancers	472	All Cancers	377
	Prostate	156	Prostate	156	Breast	112
	Lung	140	Lung	94	Colon & Rectum	56
	Breast	115	Colon & Rectum	49	Lung	46
	Colon & Rectum	105	Non-Hodgkin's Lymphoma	23	Corpus Uteri	17
	Non-Hodgkin's Lymphoma	37	Pancreas / Larynx	14º	Non-Hodgkin's Lymphoma	14
Ouachita	All Cancers	3,311	All Cancers	1,679	All Cancers	1,632
	Lung	593	Prostate	455	Breast	484
	Breast	490	Lung	353	Lung	240
	Prostate	455	Colon & Rectum	176	Colon & Rectum	193
	Colon & Rectum	369	Skin Melanomas	83	Corpus Uteri	81
	Skin Melanomas	133	Oral Cavity & Pharynx	66	Non-Hodgkin's Lymphoma	64
Richland	All Cancers	583	All Cancers	319	All Cancers	264
	Lung	102	Prostate	82	Breast	66
	Prostate	82	Lung	69	Lung	33
	Breast	68	Colon & Rectum	30	Colon & Rectum	28
	Colon & Rectum	58	Bladder	18	Corpus Uteri	15
	Non-Hodgkin's Lymphoma	28	Non-Hodgkin's Lymphoma	14	Non-Hodgkin's Lymphoma	14
Tensas	All Cancers	146	All Cancers	75	All Cancers	71
	Lung / Prostate	27	Prostate	****	Breast	****
	Colon & Rectum	21	Lung	****	Colon & Rectum	****
	Breast	19	Colon & Rectum	****	Lung	****
	Kidney & Renal Pelvis / Non-Hodgkin's Lymphoma	7º	Larynx / Kidney & Renal Pelvis	****º	Non-Hodgkin's Lymphoma	****
					Kidney & Renal Pelvis	****
Union	All Cancers	626	All Cancers	331	All Cancers	295
	Lung	134	Lung	86	Breast	93
	Breast	95	Prostate	79	Lung	48
	Prostate	79	Colon & Rectum	37	Colon & Rectum	33
	Colon & Rectum	70	Oral Cavity & Pharynx	22	Non-Hodgkin's Lymphoma	16
	Non-Hodgkin's Lymphoma	25	Skin Melanomas	14	Thyroid / Corpus Uteri	13º
West Carroll	All Cancers	342	All Cancers	180	All Cancers	162
	Prostate	52	Prostate	52	Breast	44
	Lung	46	Lung	31	Colon & Rectum	20
	Breast	44	Colon & Rectum	16	Lung	15
	Colon & Rectum	36	Oral Cavity & Pharynx	11	Non-Hodgkin's Lymphoma	11
	Skin Melanomas	18	Bladder / Skin Melanomas	9º	Skin Melanomas	9
Region 9	All Cancers	9,304	All Cancers	4,968	All Cancers	4,336
	Lung	1,577	Prostate	1,477	Breast	1,349
	Prostate	1,477	Lung	931	Lung	646
	Breast	1,364	Colon & Rectum	593	Colon & Rectum	505
	Colon & Rectum	1,098	Non-Hodgkin's Lymphoma	193	Non-Hodgkin's Lymphoma	167
	Non-Hodgkin's Lymphoma	360	Kidney & Renal Pelvis	170	Corpus Uteri	165

Top Five Cancers and Number of Cases Diagnosed by Region and Parish
Louisiana, 1997-2001
Five-Year Case Counts - Invasive Cases Only

Region / Parish	Total		Males		Females	
Livingston	All Cancers	1,663	All Cancers	887	All Cancers	776
	Lung	297	Prostate	241	Breast	224
	Prostate	241	Lung	179	Lung	118
	Breast	226	Colon & Rectum / Oral Cavity & Pharynx	88	Colon & Rectum	93
	Colon & Rectum	181	Kidney & Renal Pelvis	37	Non-Hodgkin's Lymphoma	35
	Skin Melanomas	62	Oral Cavity & Pharynx	36	Corpus Uteri	33
St. Helena	All Cancers	153	All Cancers	76	All Cancers	77
	Prostate	29	Prostate	****	Breast	****
	Lung	25	Lung	****	Lung	****
	Breast	21	Colon & Rectum	****	Colon & Rectum	****
	Colon & Rectum	15	Non-Hodgkin's Lymphoma / Multiple Myeloma	****º	Thyroid / Skin Melanomas / Pancreas	****º
	Pancreas / Non-Hodgkin's Lymphoma / Multiple Myeloma	6º	Larynx	****		
St. Tammany	All Cancers	4,088	All Cancers	2,129	All Cancers	1,959
	Breast	649	Prostate	648	Breast	643
	Prostate	648	Lung	340	Lung	300
	Lung	640	Colon & Rectum	268	Colon & Rectum	203
	Colon & Rectum	471	Non-Hodgkin's Lymphoma	86	Corpus uteri	79
	Non-Hodgkin's Lymphoma	164	Bladder	81	Non-Hodgkin's Lymphoma	78
Tangipahoa	All Cancers	2,156	All Cancers	1,203	All Cancers	953
	Lung	370	Prostate	338	Breast	307
	Prostate	338	Lung	245	Lung	125
	Breast	311	Colon & Rectum	155	Colon & Rectum	123
	Colon & Rectum	278	Non-Hodgkin's Lymphoma	48	Ovary	39
	Non-Hodgkin's Lymphoma	81	Oral Cavity & Pharynx	41	Non-Hodgkin's Lymphoma	33
Washington	All Cancers	1,244	All Cancers	673	All Cancers	571
	Lung	245	Prostate	221	Breast	154
	Prostate	221	Lung	156	Lung	89
	Breast	157	Colon & Rectum	75	Colon & Rectum	78
	Colon & Rectum	153	Non-Hodgkin's Lymphoma	30	Corpus Uteri	21
	Non-Hodgkin's Lymphoma	49	Kidney & Renal Pelvis	18	Kidney & Renal Pelvis / Ovary	20º

º Number of cases is the same at each site.
**** Cells suppressed to protect confidentiality

F. Chronic Diseases: Associated Risk Factors

1. Heart Disease And Stroke: Risk Factors

Cardiovascular diseases (CVDs) are a group of diseases of the heart and blood vessels, including coronary heart disease (CHD), which leads to heart attack, and diseases of the blood vessels that lead to stroke or hemorrhage. CVDs are the leading cause of death for both men and women in all racial and ethnic groups in Louisiana and the United States. Almost 1 million people in the United States die of CVDs each year, accounting for approximately 40 percent of all deaths.[4] In Louisiana, CVDs caused 14,697 deaths in 2002, which accounted for 35 percent of all deaths that year.[5]

In addition to the approximately 15,000 Louisiana residents who die from CVDs each year, many more state residents experience a heart attack, stroke, or other non-fatal cardiovascular event. For most of these CVD survivors, their lives have changed forever: the majority will need medications for the rest of their lives, and some are left with permanent, severe disabilities such as the loss of speech or the inability to move an arm or leg.

CVD risk factors cannot be changed include: age, sex, race and a family history of early-age heart attacks. CVD mortality increases with age, men have higher rates than women; especially pre-menopausal women. With regard to race differentiations, blacks generally have higher CVDs than whites.

However, most CVD risk factors are modifiable, meaning that individuals can change their behavior to slow or even reverse the process of arterial blockage and decrease their risk of having a heart attack or stroke. The modifiable risk factors include tobacco use, high blood pressure, high blood cholesterol, lack of regular physical activity, overweight/obesity, poor nutrition, and diabetes.

1.1 Tobacco

1.1.1 Cigarette Smoking

Cigarette smoking was the leading risk factor for disease, responsible for an estimated 6,427 deaths and 96,085 years of potential years of life lost in 1999[6]. Furthermore, cigarette smoking is responsible for one in four deaths due to CVDs and contributes to illness and death due to cancers, respiratory diseases, premature and low birth weight infants, sudden infant death syndrome, and burns. More than 872,000 adults,[7] 79,000 high school,[8] and 28,000 middle school[9] aged children in Louisiana currently smoke

[4] American Heart Association, 2004 Heart and Stroke Statistical Update. Dallas: AHA, 2000.
[5] Louisiana Office of Public Health, State Center for Health Statistics
[6] Chronic Disease Epidemiology Unit, Office of Public Health, Louisiana Department of Health and Hospitals. Smoking Attributable Mortality, Morbidity and Economic Costs (SAMMEC) Report – Louisiana 1999.
[7] Chronic Disease Epidemiology Unit, Office of Public Health, Louisiana Department of Health and Hospitals. Behavioral Risk Factor Surveillance System (BRFSS) – 2003.
[8] Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance System (YRBS) – Louisiana, 1997.
[9] Tobacco Control Program, Office of Public Health, Louisiana Department of Health and Hospitals. Louisiana Youth Tobacco Survey – 2000.

cigarettes. Smokers not only put their own lives at risk, but also affect the lives of people around them. The human and economic costs of cigarette smoking are substantial. Recent estimates show that the total direct and indirect costs for 1999 in Louisiana attributable to cigarette smoking stood at $2.81 billion or $645 per capita. [10]

1.1.1.1 Cigarette Smoking Among Adults

1.1.1.1.1 Prevalence of Cigarette Smoking among Adults

More than one in four adults in Louisiana (26.5 percent) currently smokes cigarettes.[11] Rates of adult smoking in Louisiana have not changed significantly over the past decade and have consistently been above the national mean (23.0 percent).

Rates of current smoking are higher among males, whites, individuals in the 18 - 44 year age group, individuals with annual household income less than $15,000 and in individuals with less than a high school level of education. [12]

Demographic Profile of Current Smokers

Age	% Who Currently Smoke	Sex	% Who Currently Smoke	Race	% Who Currently Smoke	Income	% Who Currently Smoke	Education	% Who Currently Smoke
18-24	31.2	**Male**	30.2	**White**	27.6	**Less than $15,000**	33.7	**Less than High School**	36.2
25-44	32.2	**Female**	23.2	**Black**	24.1	**$15,000-$24,999**	30.7	**High School or G.E.D.**	28.9
45-64	25.6			**Hispanic**	20.3	**$25,000-$49,999**	28.9	**Some post-High School**	27.7
65+	11.0					**$50,000+**	19.1	**College Graduate**	15.9

Source: Louisiana Department of Health and Hospitals Office of Public Health, Chronic Disease Epidemiology Unit, BRFSS 2003

1.1.1.1.2 Smoking Cessation among Adults

The best way to avoid the undue consequences of smoking is to never start smoking. However, reduction in disease rates among current smokers is best achieved only through cessation. Smoking cessation has major and immediate health benefits for individuals of all ages and is known to reduce the risk of lung cancer, other cancers, cardiovascular disease, and chronic lung disease.

[10] Chronic Disease Epidemiology Unit, Office of Public Health, Louisiana Department of Health and Hospitals. Smoking Attributable Mortality, Morbidity and Economic Costs (SAMMEC) Report – Louisiana 1999.

[11] Chronic Disease Epidemiology Unit, Office of Public Health, Louisiana Department of Health and Hospitals. Behavioral Risk Factor Surveillance System (BRFSS) – 2003.

[12] Behavioral Risk Factor Surveillance System Survey Data. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention, 2002.

Research shows that:[13]

- Individuals who quit before 50 years of age have a 50 percent reduction in the risk of dying in the next 15 years compared with continuing smokers.
- The risk of lung cancer declines steadily in people who quit smoking, with a 30 to 50 percent reduction in the risk after 10 years, compared to the risk for those who continue smoking.
- There is a 50 percent reduction in the risk of cardiovascular disease after 1 year in those who quit smoking and, after 15 years, their risk equals that of non-smokers.

In the readiness-to-change model, smoking cessation is viewed as a process of change with five stages: pre-contemplation, contemplation, preparation, action, and maintenance. Results from the 2003 Louisiana Behavioral Risk Factor Surveillance System (BRFSS) show that approximately 682,000 adult residents of Louisiana have quit smoking. Furthermore, an additional 472,600 have tried to quit smoking for at least one day in the past year. Trend data over the past five years (1997 – 2003) show a gradual increase in the proportion of adults who are trying to give up the deadly habit, from 49.0 to 54.3 percent.

1.1.1.2 Cigarette Smoking among Youth

Nine out of ten current smokers started before they were 18 years of age. The younger one begins to smoke, the more likely one is to remain a smoker as an adult. Health problems associated with smoking are a function of the duration (years) and the intensity (amount) of use.[14] Earlier onset of tobacco use also provides more life-years to use tobacco and thereby increases the potential risk of a range of more serious health consequences. Tobacco use is considered a part of the continuum of high-risk behaviors, which include the use of illegal drugs and anti-social behavior. These problem behaviors can be considered a syndrome, since involvement in one behavior increases the risk for involvement in others. Delaying or preventing the use of tobacco may have implications for delaying or preventing these other behaviors as well. [15]

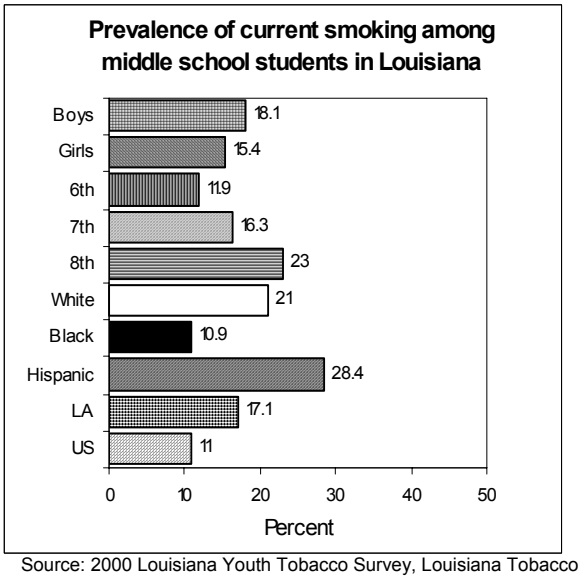
[13] U.S. Department of Health and Human Services. The health benefits of smoking cessation: a report of the Surgeon General, Atlanta: U.S. Department of Health and Human Services, Public Health Service, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1990.

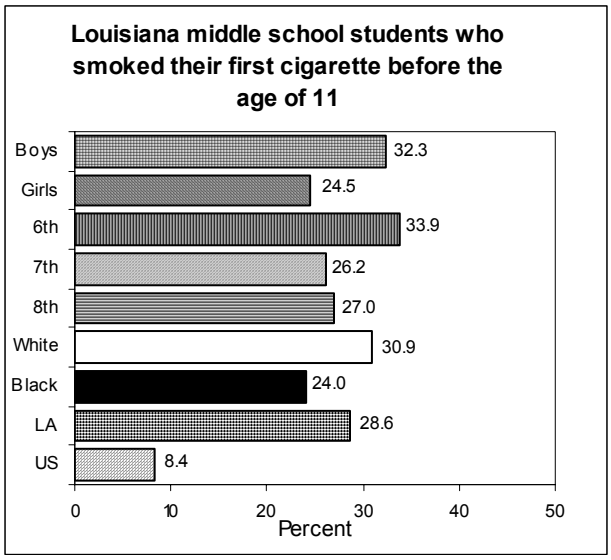
[14] U.S. Department of Health and Human Services. Preventing Tobacco Use Among Young People – A Report of the Surgeon General: U.S. Department of Health and Human Services, Public Health Service, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1994.

[15] EPA. Respiratory health effects of passive smoking: Lung Cancer and other disorders. EPA/600/6-90/006F; December 1992

1.1.1.2.1 Prevalence of Cigarette Smoking among Youth

Results from the 2000 Louisiana Youth Tobacco Survey (YTS) show that more than 70,000 public middle--school students in Louisiana (50 percent) reported having ever smoked a cigarette, and nearly one in five (17.1 percent) currently smoke cigarettes. Moreover, more than a fourth (28.6 percent) of the





Source: 2000 Louisiana Youth Tobacco Survey, Louisiana Tobacco Control Program, Louisiana Office of Public Health

students had smoked their first cigarette before the age of 11. Apart from cigarette smoking, other forms of tobacco use reported by middle-school students include cigars (12.5 percent), pipes (6.3 percent), bidis (small brown cigarettes from India consisting of tobacco wrapped in a leaf and tied with a thread) (7.1 percent), and smokeless or chewing tobacco (9.9 percent). The rates of cigarette smoking and use of other tobacco products increase with each increasing school grade. Furthermore, white and Hispanic students have higher rates of cigarette smoking compared to black students. Rates of current smoking among middle-school students in Louisiana are 50 percent higher than those of their peers nationally.

Sales of tobacco products to children under the age of 18 years are illegal and punishable by law in all 50 states and the District of Columbia. However, underage tobacco sales continue to be a major source of tobacco for minors. Nearly one in two middle-school students under the age of 18 (46.8 percent) who reported currently smoking cigarettes bought their last pack of cigarettes from a service station, convenience, grocery, or drug store. Results from the same survey also show that 70.5 percent of the middle-school aged current smokers who bought cigarettes in a store were not asked to show proof of age when buying cigarettes during the 30 days preceding this survey. In addition, a greater proportion of white students (76.0 percent) reported not being asked for proof of age as compared to black students (55.5 percent).

1.1.1.2.2 Smoking Cessation among Youth

The continuum of smoking behavior among children and adolescents can be described in five stages: preparation, initial trying, experimentation, regular smoking, and nicotine dependence or addiction. Persons who have smoked can discontinue at any stage, but quitting becomes more difficult as smokers progress through the continuum and become increasingly dependent on nicotine. Three out of four middle-school children who are current smokers (75.3 percent) think they would be able to quit smoking if they wanted to; however, only one out of two (53.8 percent) current smokers wanted to quit. Desire to quit smoking was shown to decrease with each additional school grade. Current smokers in the sixth grade were more likely to state that they wanted to quit smoking, as compared to eighth graders (61.0 percent and 47.3 percent, respectively).

1.1.1.3 Cigarette Smoking among Pregnant Women

Smoking during pregnancy is associated with increased risks for pregnancy complications, premature rupture of membranes, and modest increase in risk for pre-term delivery. Evidence shows that maternal tobacco use is associated with low birthweight, mental retardation, and birth defects such as oral clefts in the newborn. Research suggests that intrauterine exposure and passive exposure to secondhand smoke after birth are associated with an increased risk of Sudden Infant Death Syndrome (SIDS) in infants.[16] According to the 2001 Louisiana Pregnancy Risk Assessment and Monitoring System (LaPRAMS) data, an estimated total of 7,842 (12.8 percent) pregnant women (with live births) in Louisiana smoked during the last three months of pregnancy. Higher rates of smoking during pregnancy were observed among whites compared to blacks (17.9 percent vs. 5.4 percent), women with less than high-school level of education compared to those with those with a college degree (22.1 vs. 5.9 percent), and women who are not married compared to those who are (14.4 percent vs. 10.8 percent).

Smoking during pregnancy not only poses a considerable amount of risk to the developing fetus but also results in an inordinate amount of economic burden on the health care system. In 1999, neonatal expenditures attributable to maternal smoking during pregnancy in Louisiana stood at $ 5.3 million. Smoking during pregnancy resulted in an estimated 1,550 years of potential life lost due to premature mortality among infants[17].

1.1.2. Smokeless Tobacco

Smokeless tobacco (chewing or spit tobacco) can also lead to nicotine addiction, oral cancer, gum disease, and an increased risk of cardiovascular disease, including heart attacks.

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[16] U.S. Department of Health and Human Services. Women and smoking – A Report of the Surgeon General: U.S. Department of Health and Human Services, Public Health Service, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2001.

[17] Chronic Disease Epidemiology Unit, Office of Public Health, Louisiana Department of Health and Hospitals. Smoking Attributable Mortality, Morbidity and Economic Costs (SAMMEC) Report – Louisiana 1999.

1.1.2.1 Use of Smokeless Tobacco among Adults

According to 2002 BRFSS data, 15.8 percent of the adult population in Louisiana has ever used smokeless tobacco products such as chewing tobacco, dip, or snuff. Overall, four percent of the adult population currently uses smokeless tobacco products.

Demographic Profile of Current Smokeless Tobacco Users									
Age	**% Who Use Smokeless Tobacco**	**Sex**	**% Who Use Smokeless Tobacco**	**Race**	**% Who Use Smokeless Tobacco**	**Income**	**% Who Use Smokeless Tobacco**	**Education**	**% Who Use Smokeless Tobacco**
18-24	3.4	**Male**	7.5	**White**	4.8	**Less than $15,000**	4.1	**Less than High School**	5.5
25-44	5.1	**Female**	0.9	**Black**	2.5	**$15,000-$24,999**	2.0	**High School or G.E.D.**	3.9
45-64	3.9					**$25,000-$49,999**	5.3	**Some post-High School**	3.7
65+	2.4					**$50,000+**	5.1	**College Graduate**	3.7

Source: Louisiana, Department of Health and Hospitals, Office of Public Health, Chronic Disease Epidemiology Unit, BRFSS 2002

1.1.2.2 Use of Smokeless Tobacco among Youth

Use of smokeless tobacco products among youth in Louisiana appears to be widely prevalent. Results from the 2000 YTS show that more than one in two middle-school students (56.1 percent) have used smokeless tobacco products before the age of 11 years. One in ten middle-school students (9.9 percent) currently use smokeless tobacco products. Significantly higher rates of use were observed among boys compared to girls (15.8 percent vs. 3.2 percent) and white students compared to blacks (12.8 percent vs. 5.4 percent).

1.1.3 Environmental Tobacco Smoke

There is a growing body of evidence to support the harmful effect of exposure to environmental tobacco smoke (ETS), or second-hand smoke. ETS is classified as a Group A carcinogen under the United States Environmental Protection Agency's (EPA's) carcinogen assessment guidelines. Exposure to ETS causes lung cancer and has been linked to an increased risk for heart disease in nonsmokers. ETS is also known to cause irritation of the conjunctiva of the eyes and the mucous membranes of the nose, throat, and lower respiratory tract.[18] Provision of completely smoke-free environments is the most effective method for reducing ETS exposure.

18 EPA. Respiratory health effects of passive smoking: Lung cancer and other disorders. EPA/600/6-90/006F; December 1992.

1.1.3.1 ETS Exposure at home

Results from the 2003 Louisiana BRFSS survey show that nearly one in four adults in Louisiana (26.1 percent) allow smoking indoors or did not have any rules about smoking inside the house.

Demographic Profile of Adults who Allow Smoking Indoors									
Age	**% Who Allow Smoking**	**Sex**	**% Who Allow Smoking**	**Race**	**% Who Allow Smoking**	**Income**	**% Who Allow Smoking**	**Education**	**% Who Allow Smoking**
18-24	26.3	**Male**	27.2	**White**	24.5	**Less than $15,000**	33.1	**Less than High School**	33.1
25-44	27.3	**Female**	25.0	**Black**	30.1	**$15,000-$24,999**	32.1	**High School or G.E.D.**	29.5
45-64	26.9					**$25,000-$49,999**	27.7	**Some post-High School**	27.0
65+	21.7					**$50,000+**	17.2	**College Graduate**	16.0

Source: Louisiana Department of Health and Hospitals, Office of Public Health, Chronic Disease Epidemiology Unit, BRFSS 2003

1.1.3.2 ETS Exposure at work

Exposure to ETS in the workplace represents a substantial contribution to lifetime ETS exposure. Results from the 2003 Louisiana BRFSS survey show that one in five adults who work indoors most of the time (19.6 percent) report that smoking is allowed in some or all work areas or that there were no rules about smoking in their place of work. Blacks, individuals in the 18 - 24 year age group, individuals with an annual household income less than $25,000, and individuals with less than a high school education were more likely to report that their place of work did not prevent indoor smoking. These statistics highlight the increased level of health risk among a large proportion of individuals who are exposed to ETS on a daily basis at their places of work.

Demographic Profile of Adults whose Place of Work Does Not Prevent Smoking Indoors									
Age	**% Whose Work Allows**	**Sex**	**% Whose Work Allows**	**Race**	**% Whose Work Allows**	**Income**	**% Whose Work Allows**	**Education**	**% Whose Work Allows**
18-24	29.3	**Male**	26.6	**White**	18.3	**Less than $15,000**	33.3	**Less than High School**	47.5
25-44	20.3	**Female**	14.3	**Black**	23.2	**$15,000-$24,999**	24.0	**High School or G.E.D.**	22.8
45-64	16.0					**$25,000-$49,999**	20.3	**Some post-High School**	19.2
65+	10.1					**$50,000+**	14.3	**College Graduate**	12.7

Source: Louisiana Department of Health and Hospitals, Office of Public Health, Chronic Disease Epidemiology Unit, BRFSS 2003

1.1.3.3 YOUTH EXPOSURE TO ENVIRONMENTAL TOBACCO SMOKE

Research has shown that children exposed to ETS are at an increased risk for SIDS, acute lower respiratory tract infections, asthma induction and exacerbation, and middle-ear effusions.[19]

Results from the most recent YTS show that more than three out of four middle school students (84.5 percent) believe that exposure to ETS is harmful. Middle school students who are current smokers were less likely to believe that ETS exposure can be harmful, as compared to those who have never smoked (77.1 percent and 87.0 percent, respectively).

Nearly one in two middle-school students (48.9 percent) currently live with someone who smokes cigarettes. Middle-school students who were smokers were significantly more likely to be living with someone who smoked, as compared to non-smokers, (66.7 percent and 33.7 percent, respectively). One of out two middle school students (50.8 percent) in Louisiana rode in the car with someone smoking on, at least, one out of the seven days preceding the survey.

1.1.4 Impact of Tobacco Use

1.1.4.1 Morbidity and mortality

Results from the recent Smoking Attributable Morbidity, Mortality and Economic Costs (SAMMEC) study show that, in 1999, cigarette smoking contributed to an estimated 6,427 deaths in Louisiana, accounting for 16.0 percent of all deaths in that year. Also, an estimated 96,085 years of potential life lost (YPLL) resulted from the premature mortality resulting from cigarette smoking. Cancer was the leading cause of smoking-attributable YPLL in Louisiana in 1999, being specifically responsible for 41,890 YPLL (27,088 male and 14,802 female). Cardiovascular disease (CVD) caused a loss of 38,249 years (22,731 male and 15,518 female) of potential life, while respiratory diseases caused 15,948 years to be lost (8,118 male and 7,830 female).

1.1.4.2 Economic costs

Results from SAMMEC also estimate the total direct and indirect costs for 1999 in Louisiana attributable to cigarette smoking at $2.81 billion. Smoking-attributable direct medical costs totaled $1.15 billion:

- $392 million for ambulatory care
- $308 million for hospitalizations
- $101 million for prescription drugs
- $268 million for nursing home services
- $82 million for other professional services

19 EPA. Respiratory health effects of passive smoking: Lung cancer and other disorders. EPA/600/6-90/006F; December 1992.

Indirect costs due to loss of productivity resulting from the premature deaths for 1999 in Louisiana due to cigarette smoking were estimated at $1.66 billion. This included $731 million due to malignant neoplasms, $755 million due to CVD, and $178 million due to respiratory diseases.

1.2 Overweight and Obesity

New Definitions:
Overweight - an adult with a BMI between 25.0-29.9 kg/m^2
Obesity - an adult with a BMI of 30 kg/m^2 or greater
Note: Because of these changes, readers may find earlier obesity/overweight figures that do not agree with those found in this report.

The three main factors that affect weight are: metabolism, food intake, and activity level. While some individuals may have underlying physical disorders that cause them to gain or lose too much weight, most people can control their weight by matching their food intake to their activity level. Even though an individual's body mass index (BMI) is, for the most part, within his or her control, the percentage of people in the United States who are overweight or obese has been steadily and dramatically on the rise. Adult obesity in Louisiana rose from 16 percent in 1991 to 25 percent in 2003, with the largest jump seen in the 18-to-24-year-old age group. Being overweight and/or obese substantially increases the risk of hypertension, high cholesterol, type II diabetes (adult onset), heart disease, stroke, gallbladder disease, osteoarthritis, and various cancers.[20]

BMI is an index of weight relative to height, which is used to estimate the amount of fat a person has on his or her body. Prior to 1995, the World Health Organization (WHO) defined overweight as a BMI equal to or greater than 27.8 for males, and a BMI equal to or greater than 27.3 for females. However, as evidence mounted that indicated an increased risk of morbidity and mortality for individuals with a BMI of 25.0 or greater, WHO responded by redefining overweight and obesity. According to current definitions, a person is defined as overweight if his or her BMI is between 25.0 and 29.9 and obese if their BMI is greater than 30.0. Because of this change, readers may find earlier obesity/overweight figures that do not agree with those found in this report and are therefore cautioned against comparing previously reported statistics with the numbers found here.

Overweight and obese adults are at increased risk for CVDs. Over the last 13 years (1991 - 2003), the percent of overweight and/or obese Louisiana residents increased from 49 percent to 61 percent.

1.3 High Blood Pressure

High blood pressure, or hypertension, is a major risk factor for both heart disease and stroke. According to results from the 2003 BRFSS survey, nearly one in three adult residents of Louisiana (30 percent)

20 Stunkard AJ, Wadden TA. (Editors) Obesity: Theory and therapy, Second Edition. New York: Raven Press, 1993.

suffers from high blood pressure. The proportion of Louisiana residents with undiagnosed hypertension is unknown. Nationally, only two thirds of people with high blood pressure know they have it, one half are receiving treatment, and one fourth are under control. High blood pressure is a major risk factor for both coronary heart disease (CHD) and stroke.[21] It is important to ensure adequate control of high blood pressure through exercise, weight management, and medication.

1.4 High Cholesterol

Elevated cholesterol is one of the strongest risk factors associated with CHD.[22] Cholesterol plays a direct role in the atherosclerotic process, the disease process that underlies heart disease and stroke, where cholesterol accumulates on the arterial walls, building plaque and restricting blood flow. Low-density lipoprotein (LDL), the "bad cholesterol," clogs the arteries to the heart and increases the risk for heart disease. High-density lipoprotein (HDL), the "good cholesterol," decreases the risk for heart disease. A high total cholesterol level increases the risk for heart disease. Lowering high total blood cholesterol levels can decrease the likelihood of death from heart disease.

The proportion of Louisiana adults 35 years and older who have not had their blood cholesterol checked within the previous five years was 18.6 percent in 2003. Of persons who had ever been checked, the percentage who reported that they have high cholesterol was 38.4 percent in 2003.

1.5 Physical Inactivity

Regular physical activity is associated with significant health benefits and has been shown to decrease mortality and morbidity due to several diseases. The benefits of regular physical activity include, but are not limited to, reduction in the rates of heart disease, blood pressure, stroke, diabetes, osteoporosis, colon cancer, and mood disorders such as anxiety and depression. Regular physical activity also helps maintain body weight, aids in the management of osteoarthritis, and reduces the risk of falls and fractures.[23] Moderately intense physical activity such as a brisk walk or raking a lawn can provide the desired results. Although there is a wide variation in the recommended level of physical activity, the consensus is that at least 30 minutes of physical activity on at least five or more days a week is sufficient.

The vast majority of Louisiana residents are not physically active on a regular basis. Approximately 72 percent of Louisiana adults do not get regular physical activity (defined as engaging in at least 30 minutes of moderate-intensity activity, such as walking at a brisk pace, on five or more days a week).

21 American Heart Association, Heart and Stroke Statistical Update, 2004. Dallas, TX: AHA, 2001.
22 American Heart Association, Heart and Stroke Statistical Update, 2004. Dallas, TX: AHA, 2001.
23 U.S. Department of Health and Human Services. Physical Activity and Health: Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 1996.

1.6 Diet

Eating five or more servings of fruits or vegetables per day can help prevent heart disease, cancer, and other chronic conditions. In 2000, 85 percent of Louisianans reported that they did not consume at least five servings of fruits and vegetables per day.

2. DIABETES: MANAGEMENT

Diabetes mellitus (diabetes) is a serious chronic disease caused by either a shortage of, or a decreased ability to use, insulin, the hormone that allows glucose (sugar) to enter cells and be converted to energy. Uncontrolled, this deficiency leads to the damaging of vital organs, caused by the prolonged presence of glucose and fats in the blood. Persons who are obese, physically inactive, members of ethnic minorities (blacks, Hispanic/Latino Americans, and American Indians), and those with a family history of diabetes or prior gestational diabetes, are at higher risk of acquiring diabetes.

Diabetes is a common and serious disease in Louisiana. It is costly not only in terms of the economic burden it imposes on the state, but also in terms of the human suffering it inflicts, including complications. In 2001, Louisiana had the highest death rate in the nation due to diabetes (41.7 per 100,000 population). Diabetes is also the leading cause of blindness in adults aged 20 to 74 and the most common cause of non-traumatic amputations and end-stage renal disease, accounting for approximately 40 percent of new cases of end stage renal disease nationwide.

The total cost of diabetes in Louisiana, estimated for 1997, was over $2.2 billion. This cost, which reflects estimates derived from known cases of diabetes, is likely an underestimate, given that about one third of all diabetics are undiagnosed.

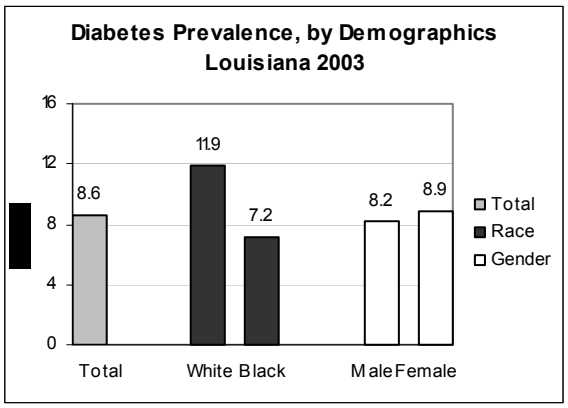
2.1 Prevalence

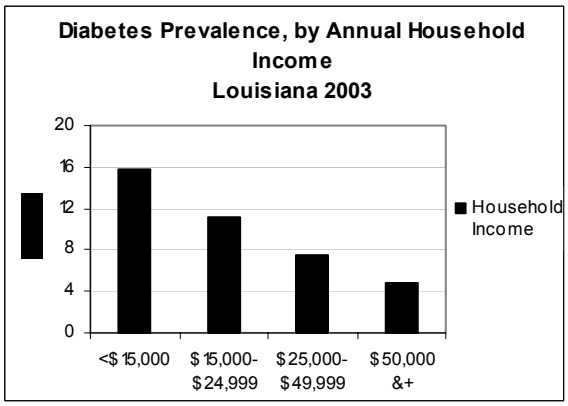
The overall prevalence of diabetes in Louisiana is 8.6 percent (BRFSS, 2003). There are, however, many demographic variables to account for when studying prevalence. Using BRFSS, these differences were identified for race, sex, age, and household income.

Data analysis showed that, in 2003, blacks had a higher prevalence of diabetes than whites (11.9 percent vs. 7.2 percent), and that adult women had a higher prevalence than men (8.9 percent vs. 8.2 percent). The likelihood of having diabetes increases with age among Louisiana residents, with the highest prevalence found among those 65 years or older (18.5 percent), and the lowest prevalence found in those under 45 years of age (2.7 percent).

In terms of household (HH) income, the prevalence of diabetes is higher for adults in Louisiana from households with lower total incomes, and for those with lower educational attainment. For persons living in households with a yearly income less than $15,000, the prevalence of diabetes is approximately 15.8

percent. This prevalence steadily decreases as the yearly income rises with the lowest prevalence for those with annual income of more than $50,000 (4.8 percent).





Source: Louisiana Department of Health and Hospitals, Office of Public Health, Chronic Disease Epidemiology Unit, BRFSS 2003

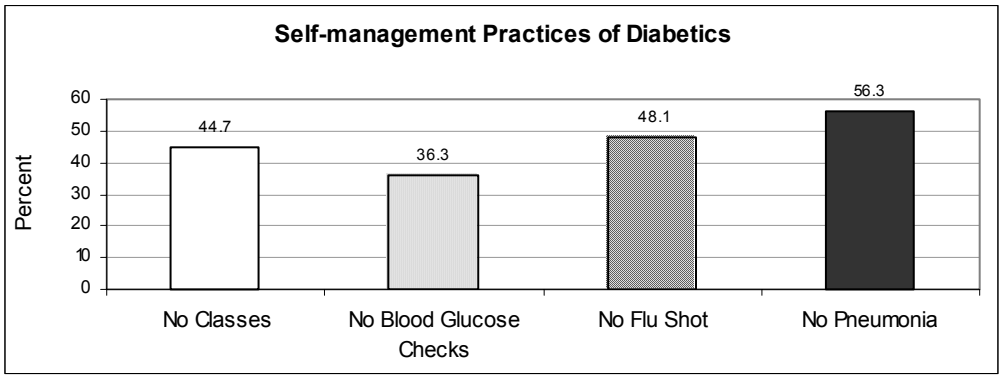
2.2 Preventive Practices

Reducing the burden of disease due to diabetes requires active and effective management of the disease, by both diabetics and those who treat them. For those affected by diabetes, following recommended preventive and curative practices is the best way to ensure a good quality of life. These practices include self-management classes, monitoring blood glucose levels, and vaccinations for both influenza and pneumonia.

2.2.1 Self-Management Courses

A thorough understanding of diabetes is critical to knowing how to properly manage the disease. It is important for diabetics to be consistent with care and up to date on the best practices for management. For this reason, it is recommended that diabetics and their families take classes that teach self-management. An estimated 45 percent of Louisiana diabetics, however, have not yet taken such a course (BRFSS, 2003).

Louisiana diabetics 65 years of age and older, who are most vulnerable to morbidity, are the least likely to have taken a self-management course. In addition, more white diabetics (50.6 percent) than black diabetics (35.4 percent) reported that they have never taken a class on how to manage their diabetes, and more non-insulin users (51 percent) than insulin-users (34 percent) reported never having attended a class on how to manage their diabetes.



Source: Louisiana Department of Health and Hospitals, Office of Public Health, Chronic Disease Epidemiology Unit, BRFSS 2003

2.2.2 Blood Glucose Monitoring

The most fundamental aspect of self-managing diabetes is keeping blood sugar levels within the normal range. Although diabetics are advised to monitor their blood glucose levels several times a day, it is crucial that they check the level, at least, once a day. When asked how often they checked their blood glucose levels in a day, 36.3 percent of Louisiana's diabetics responded that they failed to check, at least, once daily.

2.2.3 Influenza

Because diabetics are more likely than non-diabetics to suffer from complications of influenza (flu), it is recommended that they get an annual flu shot as a necessary precaution. In 2003, nearly half of Louisiana diabetics (48.1 percent) had not received a flu shot within the last year. In terms of race, 54.2 percent of black diabetics and 44.4 percent of white diabetics reported that they had not received an annual flu shot. Approximately 78.2 percent of diabetics under the age of 45 and 52.4 percent of diabetics ages 45 to 64 had not received a flu shot.

2.2.4 Pneumonia

Like the flu vaccine, pneumonia vaccinations are important to the health of diabetics. Nationally, however, only about one in three adults with diabetes are vaccinated for pneumonia. A pneumonia shot every 10 years is recommended for anyone aged two years or older who might be at higher risk of getting pneumonia due to an existing chronic condition, such as diabetes. Unfortunately, 56.3 percent of diabetics in Louisiana reported never having received a pneumonia vaccination (BRFSS, 2003). Black diabetics were less likely to have ever received a pneumonia vaccination than white diabetics (64.5 percent vs. 51.3 percent). Likewise, those with annual household incomes less than 15,000 were less likely to have had a pneumonia vaccination than those with annual household incomes over $50, 000.

2.3 Medical Office Visits

It is essential that persons with diabetes see a physician or other health professional specifically for their condition. Diabetes has the distinction of being one of the few chronic diseases that must be actively managed on a daily basis in order to be effectively controlled. The affected persons should perform the tasks addressed earlier, such as daily monitoring of blood glucose, and ensure that they receive the recommended standard of care from their healthcare professionals in terms of consultations, foot examinations, and eye examinations.

2.3.1 Hemoglobin A1c (HgA1c)

The HgA1c test is the most reliable method for determining average blood sugar levels over the three months prior to the test. Diabetics are advised to have this test once every three months. Since the test provides the best indication of blood sugar over the previous three months, health professionals can make the necessary determination on how to proceed with care, including insulin adjustment. BRFSS analysis shows that, of diabetics surveyed in 2003, only an estimated 61.8 percent reported that they had received even one HgA1c test in the previous year. About 35.7 percent of blacks and 41.7 percent of whites responded that they had not had the test even once in the previous year. Diabetics in the highest income bracket ($50,000 and over) comprise the lowest proportion not having received an HgA1c annually (24.3 percent). Those with a yearly income of $25,000 to $49,000 have the highest proportion at 44.5 percent (almost twice the rate of the former group) not receiving an HgA1C test annually.

2.3.2 Foot Examinations

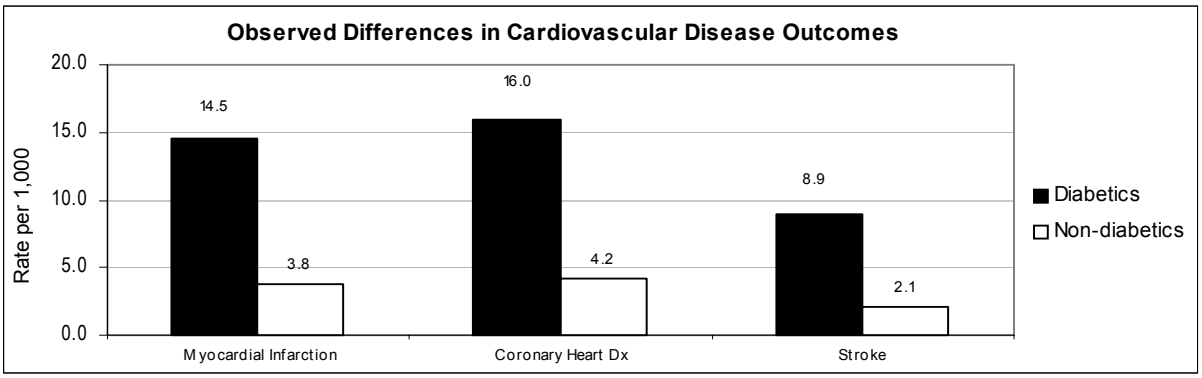
Diabetics are asked to check their own feet regularly and to have them checked by a health professional at least once a year. While self-examinations of the feet allow the patient to catch any sores or cuts that might progress if undetected, medical professionals have the proficiency to, among other aspects of complications, detect signs of nerve damage and prescribe appropriate measures. Overall, 28 percent adult Louisiana diabetics did not receive a foot examination in the 12 months prior to the survey. The state's white diabetics are more likely than black diabetics to report not receiving a foot examination (35 percent and 20 percent, respectively).

2.3.3 Eye Examinations

Diabetes has been proven to be the leading cause of new cases of blindness in adults aged 20 to 74 years. Therefore, annual eye examinations by healthcare professionals provide the possibility of early detection for signs of retinopathy and allow appropriate measures to be taken. Overall, an estimated 32 percent of Louisiana diabetics did not have an eye examination in the previous year.

2.4 Co-Risk Factors

Because diabetes causes damage to many vital organs over time, diabetics are at higher risk than non-diabetics for morbidity and mortality. To assess the extent to which diabetes does increase the risk of morbidity, three outcomes were selected for analysis, comparing the rates (per 1,000) between diabetics and non-diabetics. Louisiana diabetics were found to have about four times the risk for myocardial infarction that non-diabetics have, five times the risk for coronary heart disease, and three times the risk for stroke.



Source: Louisiana Department of Health and Hospitals, Office of Public Health, Chronic Disease Epidemiology Unit, BRFSS 2003

Reducing the burden of disease due to diabetes requires monitoring diabetics on risk factors associated with other morbidity outcomes. Risk factors that may potentially speed the progression of disease in diabetics and impose excess morbidity include obesity, physical inactivity, hypertension, high cholesterol, and tobacco use. The following section examines the distribution of some important risk factors among Louisiana diabetics.

2.4.1 Overweight/Obesity

Overweight and obesity continue to be an area of particular relevance in the state. Thirty-two percent of Louisiana diabetics are overweight, and another 48 percent are obese. Hence, approximately 80 percent of all adult diabetics in Louisiana are overweight/obese. Given the high proportion that is overweight or obese, the expectation would be that a high proportion of adult diabetics are trying to lose weight. Only half (51 percent) of the total diabetic population, however, reported in 2003 that they were trying to lose weight. Because the maintenance of an ideal body weight depends on lifestyle choices over which every individual has some measure of control, this is an area with considerable opportunity for worthwhile impact. The consumption of proper foods in moderation is essential to weight control.

2.4.2 Physical Activity

Combined with a nutritionally balanced diet, moderate physical activity is critical for physiological balance and well-being. The BRFSS defines "any exercise" as participation, over the previous month, in any physical activities such as running, calisthenics, golf, gardening, or walking, outside of the duties of one's regular work. Nearly half (41%) of Louisiana diabetics reported that they had not exercised at all over the month prior to the survey.

The benefits of physical activity are greater when activity is regular and sustained. The BRFSS defines moderate physical activity as engaging in 30 minutes of moderate activities, five or more times per week, or 20 minutes of vigorous activity 3 or more times per week. In Louisiana, about 71.7% of diabetics do not engage in moderate physical activity as defined above.

2.4.3 Hypertension

In the absence of physical activity and a nutritious diet, many diabetics are in jeopardy of developing high blood pressure. The CDC reports that an estimated 60 to 65 percent of persons with diabetes have high blood pressure, placing them at increased risk for several morbidity outcomes, including heart attack and stroke. The overall rate of high blood pressure among Louisiana diabetics in 2003 was 70 percent. Of black diabetics in the state, 80.6 percent appear to be particularly affected by high blood pressure, relative to white diabetics (64.2 percent). Moreover, diabetics from households with the lowest total income have the highest rates of high blood pressure (76.2 percent).

2.4.4 Cholesterol

As with blood pressure, elevated blood cholesterol levels are associated with adverse cardiovascular outcomes for diabetics. Approximately 50 percent of all adult diabetics in Louisiana have high blood cholesterol. Broken into demographic groups, cholesterol prevalences are directly proportional to levels of education, those with less than a high school education having the largest prevalence of high cholesterol (61.7 percent).

2.4.5 Tobacco Use

Tobacco use, even without the complication of other chronic diseases, is one of the most important risk factors for morbidity. Combined with the complications of other chronic diseases such as diabetes, it greatly increases the risk of stroke and cardiovascular health problems. The prevalence for smoking among diabetics is estimated to be 21 percent.

Some of the greatest disparities in current smoking among diabetics occur between gender and age. At 17.4 percent, female diabetics are less likely to smoke than males (24.9 percent). In addition, younger diabetics are proportionately more likely than older diabetics to be current smokers. The relationship between age and current smoking among Louisiana adult diabetics shows a gradient decrease with age.

The youngest group of Louisiana adult diabetics (less than 45 years of age) smokes at a rate (39 percent) that is more than 1.5 times the rate (24 percent) of the next age group (45-64 years), and more than four times the rate (9 percent) of the oldest age group (65 years and above). While diabetics are strongly advised not to smoke, smoking represents a risk factor that diabetics and non-diabetics alike should be encouraged to avoid.

While it has been shown that diabetes is a very serious and costly disease, it is often preventable and even manageable. Because diabetes management involves behavior modifications, self-management is very important to control. Surveillance systems such as the BRFSS and the Diabetes Prevention and Control Program are instrumental to identifying areas of need for increased emphasis on diabetes education in an effort to reduce the morbidity and mortality of those affected by the disease.

3. CANCER SCREENING

Cancer is a potentially fatal disease that affects millions of people in the United States every year. It is the second leading cause of death after cardiovascular disease.[24] Nevertheless, early detection of cancer will increase a person's chances of survival. The following discussion provides screening information for five of the most common forms affecting residents of the United States: breast, cervical, prostate, colorectal, and skin cancers.

3.1 Breast Cancer Screening

Except for skin cancer, breast cancer is the most commonly diagnosed cancer among women in the United States. It is second to lung cancer as the leading cause of cancer-related death. The American Cancer Society estimated that 39,600 women would die of breast cancer in 2002. Routine breast examinations by a health professional, or mammography and clinical breast examination (CBE) are the most effective ways of detecting breast cancer early and improving the chances of survival. All women aged 50 and older should undergo mammography, with or without a CBE, every one to two years. Nevertheless, the United States Preventive Services Task Force (USPSTF) indicates that women may begin breast cancer screening at age 40 with some added benefit. Women should discuss these options with their health care provider.

In the 2002 BRFSS, among Louisiana women aged 40 and older, 23.6 percent reported they had not had a mammogram within the two years before the survey. Black women (24.4 percent) and white women (22.9 percent) had similar rates of reporting that they had not had a mammogram within the last two years. It is important to note that while white women are more likely to develop breast cancer, black

[24] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health statistics. Deaths: Leading Causes for 2000. NVSR Vol.50; No.6.

women have a higher mortality rate from the disease. Clearly, it is vital that all women aged 40 and older, regardless of race, be screened regularly for breast cancer.

The percentage of women 40 years and older not receiving the recommended breast cancer screening has drastically decreased from 1991 to 2003. Currently in Louisiana, over 76 percent of women in this age group receive a mammogram, which meets and exceeds the Healthy Louisiana 2010 goal of having 70 percent of the women aged 40 and over screened within the preceding two years. Women in the lowest socioeconomic tier (i.e., with an income of less than $15,000 per year) are over twice as likely to be inadequately screened as women in the highest socioeconomic tier (annual income greater than $50,000).

3.2 Cervical Cancer Screening

The CDC recommends that, from the onset of sexual activity, but no later than their 18th birthday, women should receive a Papanicolaou (Pap) test annually to detect cervical cancer and precancerous lesions. After receiving normal results for three consecutive annual tests, physicians may decide to test less frequently. In the year 2002, the American Cancer Society projected that 13,000 new cases of cervical cancer would be detected. Early detection of cervical cancer through screening has decreased the number of deaths nationally from cervical cancer over the past 40 years. According to results from the 2002 BRFSS, approximately 12 percent of adult women in Louisiana did not receive a Pap test within the last three years. White women in the state are more likely not to receive adequate screening for cervical cancer (12.5 percent) than black women (7.3 percent).

A high proportion of women who are 65 years of age and older (25 percent) were not screened within the last three years. Many older women do not realize that they are at risk for the disease. According to the American Cancer Society, the average age for a woman newly diagnosed with cervical cancer is 50 to 55 years old. Risk of cervical cancer does not decrease after age 40, so it is important for older women to be screened regularly.

3.3 Prostate Cancer Screening

Prostate cancer is the second leading cause of death due to cancers among men over the age of 45 years, and overall it is the fifth leading cause of death among men in that age group.[25] In 2001, 3,216 new cases of prostate cancer were diagnosed among men in Louisiana (SEER, Nov 2003). Furthermore, there were over 562 deaths due to prostate cancer in the state in 2001 (CDC Wonder).

There are no clear risk factors for developing prostate cancer. However, men with a family history of prostate cancer and black men appear to be at an increased risk of developing the disease. Also, although there are screening tests such as the Prostate Specific Antigen (PSA) and Digital Rectal Exam

[25] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.

(DRE) to detect the presence of prostate cancer, there appears to be no clear consensus among the medical community about the reliability of these tests in detecting prostate cancer. Furthermore, the medical community is also divided on the issue of what constitutes recommended, adequate, and frequent male screening for the disease.[26]

According to results from the 2002 Louisiana BRFSS, an estimated 30,000 Louisiana men 40 years of age or older (3.5 percent) reported being told by a healthcare professional that they have prostate cancer. Data from the 2002 BRFSS also show that approximately 364,000 men over the age of 40 years in the state (45.0 percent) have not been screened for prostate cancer with a PSA test in the last two years. Forty one percent of black men over the age of 40 years reported not having had a PSA test in the last two years, compared to 43.2 % of white men.

There are no known methods to prevent prostate cancer. Therefore, individuals in the high-risk groups should have periodic evaluations by a medical professional to detect early tumors and prevent the growth and spread of such tumors.

3.4 Colon Cancer Screening

Colorectal cancer, or cancer of the colon or rectum, is the second leading cause of cancer-related deaths in the United States and in Louisiana.[27] In 2001, there were 950 deaths due to colon cancer in Louisiana, with an estimated 2,600 new cases of colon and rectum cancer expected to be detected in the year 2002. Colorectal cancer occurs most often in people aged 50 and older and can affect both men and women. The risk of colorectal cancer may be higher than average for individuals with the following risk factors: a close relative who has colorectal polyps or cancer, a personal history of inflammatory bowel disease, and/ or a personal history of intestinal and colon polyps. A diet primarily from animal sources, physical inactivity, obesity, and smoking are also known risk factors for colorectal cancer.[28]

As with several other cancers, routine screening is known to help in early detection and treatment to prevent the progression of colorectal cancer. The USPSTF recommends initiating screening at age 50 for men and women at average risk for colorectal cancer, based on the higher incidence of cancer in this and older age groups, relative to the general population. In persons at higher risk (e.g., those with a first-degree relative who receives a diagnosis with colorectal cancer before 60 years of age), initiating screening at an earlier age is reasonable. Annual home blood stool tests for individuals over the age of 50, combined with a flexible sigmoidoscope examination every 5 years, are known to be effective in

[26] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Diseases. Prostate Cancer: Can we reduce deaths and preserve quality of life? AT-A-GLANCE-2000

[27] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.

[28] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Diseases. Colorectal Cancer: The Importance of Prevention and Early Detection. AT-A-GLANCE-2001

diagnosing early tumors. Results from the 2001 BRFSS show that more than half of the adults over the age of 50 (55.8 percent) have not had either a home blood stool test or a flexible sigmoidoscope examination in accordance with the USPSTF guidelines. Of those who have not had the tests, a greater proportion was black relative to white (59.7 vs. 54.3 percent).

3.5 Skin Cancer Risk Reduction

Skin cancer is one of the common forms of cancer in Louisiana. According to the Louisiana Tumor Registry, 351 new cases of skin cancer were reported in Louisiana in 1999, with 84 deaths being reported in the same year.

Exposure to the sun's ultraviolet (UV) rays appears to be the most important environmental factor in the development of skin cancer. The disease can be prevented when sun-protective practices are used consistently. UV rays from artificial sources of light, such as tanning beds and sun lamps, are just as dangerous as those from the sun and should also be avoided. Although both tanning and burning can increase a person's risk for skin cancer, most people in the United States do not consistently protect themselves from UV rays. According to results from the 2000 BRFSS survey, only one in ten adult Louisiana residents (12 percent) who were out in the sun for more than an hour reported using a sunscreen to protect themselves. Females were twice as likely as males to report sunscreen use (16.3 percent and 7.8 percent, respectively).

4. IMMUNIZATIONS

For persons over the age of 65 years or for individuals who have chronic diseases, vaccinations are very important precautions. The CDC and *Healthy People 2010* give special attention to vaccinations against pneumonia and influenza (flu). These two diseases are preventable with vaccination and are very dangerous for people in high-risk groups.

4.1 Pneumonia Vaccinations

It is recommended that all adults aged 65 or older, or those who have chronic conditions such as diabetes, cardiovascular disease, and cancer, receive a pneumonia vaccination at least once in their lifetime.

In Louisiana, 35.8 percent of the adult population reported in 2003 that they had never received a pneumonia vaccination. Proportionately, more blacks (49.9 percent) responded that they had never received a pneumonia vaccination than whites (32.3 percent).

4.2 Influenza Vaccinations

All adults aged 65 or older, as well as those at younger ages who have pre-existing chronic diseases, should receive flu shots on an annual basis to ensure good health.

Analysis of 2003 BRFSS data estimates that 31.7 percent of Louisiana residents over age 65 did not receive a flu shot in the previous year. Blacks in this age group were significantly more likely not to have met the CDC recommendation for an annual flu shot than whites at 43.1 and 28.7 percent, respectively.

5. ASTHMA PROGRAM

5.1 Asthma in the Nation

Asthma is a chronic respiratory disease characterized by wheezing and shortness of breath. In the last few years, the disease has become an emergent public-health concern in the United States. Asthma is the most common chronic disease facing children, accounting for 10.1 million missed days of school, and is the third-ranking cause of hospitalization among those younger than 15 years of age. Nationwide, approximately 4.8 million children under the age of 18 (7 percent) currently have asthma. According to the Centers for Disease Control and Prevention, approximately 10.3 percent of adults in the United States in 2002 had ever been told that they had asthma, and 7.7 percent were current asthmatics.

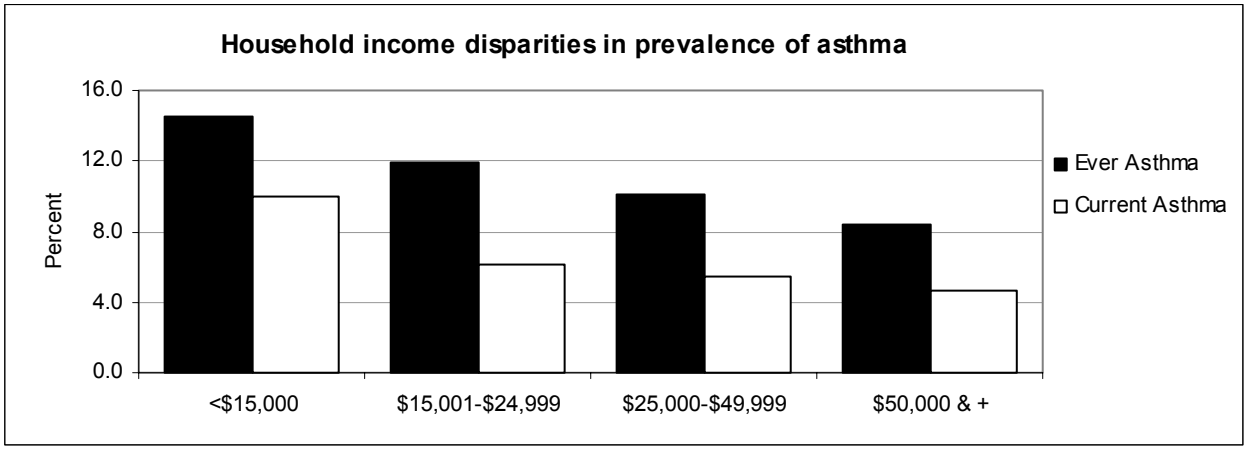
5.2 Adult Asthma in Louisiana

In 2002, the BRFSS Optional Asthma Module was used to determine the prevalence of asthma in adults in Louisiana. This module included two questions about asthma that had been asked in previous years: 1) Did a doctor ever tell you that you had asthma? and 2) Do you still have asthma? Analysis showed that approximately 10.4 percent of adults in the state have had asthma at some time, and approximately 6.0 percent currently have asthma. This is an increase from 2000 when only 8 percent of respondents had ever had asthma and 5 percent currently had asthma.

Demographically, blacks were more likely than whites to report that they had asthma at some time in the present or past (11.2 percent vs.10.2 percent). When asked if they still had asthma, 6.7 percent of blacks and 5.9 percent of whites reported that they did at the time of the interview. BRFSS analysis also showed that there is a direct correlation between age and ever having asthma as well as current asthma. Survey respondents in the 18-24-year age group had the highest prevalence of ever having asthma while the lowest prevalence occurred in those who are 65 years of age or older (16.8 percent vs. 7.1 percent). Similarly, 7.4 percent of those aged 18-24 currently had asthma in comparison to 4.8 percent of those 65 and older.

Of all demographic categories analyzed, the greatest disparity in asthma prevalence existed in income levels. As shown in the figure on the next page, adults in Louisiana who have a yearly household income of less than $15, 000 are almost twice more likely to have suffered with asthma at some time in their lives than those in the highest income bracket of over $50,000 (14.5 percent vs. 8.4 percent). These results were consistent with the current asthma analysis where 10.0 percent of those in households with

earnings of less than $15,000 thousand yearly had asthma at the time and only 4.6 percent of those in households with yearly incomes above $50,000 had asthma at the time of the interview.



Source: Louisiana, Department of Health and Hospitals, Office of Public Health, Chronic Disease Epidemiology Unit, BRFSS 2002

5.3 Childhood Asthma in Louisiana

In an effort to measure the prevalence of asthma among children under the age of 18 years, a new Module was added to the BRFSS in 2002. The Optional Childhood Asthma Module asks if there are children with asthma in the home of the respondent. Survey participants who indicated that there were, in fact, children living in their homes were subsequently asked if one or more of the children had ever had asthma and if the child/children had asthma currently. Analysis revealed that approximately 43.1 percent of homes in Louisiana have children living in them and, of these, 10.7 percent have children with current asthma.

Houses in which the survey respondent was white have the lowest prevalence of children with asthma. At 8.4 percent, white households are in stark contrast to all other racial groups surveyed. The prevalence of childhood asthma was 13.5 percent among black households, 16.2 percent in Hispanic households, and 17.5 percent for households in which the respondent chose “Other” as their racial group. Those households with an annual income of less than $15,000 per year had the highest prevalence of childhood asthma (21.3 percent). In comparison, houses with an income of $50,000 per year or more have a prevalence of 8.1 percent for children in the house with asthma. Houses in which the survey participant is unemployed also have a high prevalence of childhood asthma, at 21.8 percent. In homes where the respondent was retired, the prevalence was 18.4 percent, while, in homes where the respondent was employed, it stood at 6.4 percent.

5.3 Effect of Smoking on Childhood Asthma

Because the BRFSS is an adult survey and children are not questioned directly, the State of Louisiana Chronic Disease Epidemiology Unit added the International Study of Asthma and Allergies in Childhood

(ISAAC) wheezing module to the 2001 Youth Tobacco Survey, a survey of public middle-school students age 12-16 years. An estimated 17.4 percent of students questioned were classified as current asthmatics, while 25.7 percent of the students reported having ever had asthma in their lives. The prevalence of asthma was found to be higher in female students than males (19.6 percent vs. 15.6 percent) and slightly lower for whites than blacks (16.8 percent vs. 18.0 percent). The most significant source of disparity in asthma prevalence was between students aged 12-14 and those aged 15-16. Further analysis showed that 17.8 percent of 12-14 year old students were current asthmatics, while only 12.8 percent of those 15-16 also had asthma. Of students who are current asthmatics, 30.7 percent are themselves smokers, 68.7 percent were likely to spend at least one day a week in the room with someone who smoked, 57.8 percent live with someone who smokes, 54.7 percent ride in the car with a smoker, and 39.3 percent has, at least, one close friend who smokes.

Association between Smoking and Current Asthma

Characteristic	Current Asthma	
	Yes	No
1. Current Tobacco Use (excluding smokeless)	30.7	22.8
2. In the same room with someone who was smoking (at least 1 day in the last week)	68.7	59.3
3. In the car with someone who was smoking (at least 1 day in the last week)	54.7	40.9
4. Live with someone who smokes	57.8	47.0
5. At least one of close friend smokes	39.3	33.7

Source: Louisiana, Department of Health and Hospitals, Office of Public Health, Chronic Disease Epidemiology Unit, BRFSS 2002

5.4 Asthma Mortality

The national mortality rate for asthma in 1998 was 2.0/100,000. Although Louisiana has one of the lowest state prevalences for asthma, a three year aggregate of mortality rates found that the state ranked 13th in death rates due to asthma. In the years 1996-1998, mortality rates for asthma in Louisiana were 2.4/100,000 for all citizens and 10.1/100,000 for those over the age of 65. In the City of New Orleans, the overall mortality rate attributable to asthma was 6.9/100,000. For Orleans Parish residents over the age of 65, the asthma mortality rate is 2.5 times the rate for the same age group in the state as a whole (27.5/100,000 vs. 10.1/100,000). Furthermore, it is more than three times the 1998 rate for the United States in the 65 and older age group (27.5/100,000 vs. 8.7/100,000).

Because there is no asthma-specific emergency room surveillance in the State of Louisiana, surveillance systems such as the BRFSS, YTS, and ISAAC make it possible to generate information and to develop interventions that will help control asthma in the state. Further studies on the prevalence of asthma in school aged children, as well as the association between smoking and asthma, are important in reducing the asthma mortality rates in Louisiana.

G. TRAUMATIC BRAIN INJURY

Traumatic Brain Injury (TBI) is one of the leading causes of death and disability to children and young adults in the United States and Louisiana. An estimated 5.3 million individuals, approximately 2 percent of the United States' population, are living with a disability resulting from a TBI.

An analysis of two years of data indicates that, annually in Louisiana, 3,400 individuals experience TBIs that require hospitalization. Several thousand more individuals will not recognize that they have sustained a preventable injury (as in closed head trauma from sports or falls) capable of causing long-term deficits. TBIs can have a deep impact on families and communities and they are resource-intensive, both financially and emotionally.

TBIs can be markers of inadequate prevention policies, correctable environmental hazards (e.g., uneven sidewalks), and other injury-prevention opportunities. Alcohol-impaired driving, unsafe boating, unsafe bicycling, and violence can be assessed separately. Pedestrian injuries may be linked to poor signage, alcohol use, poor outdoor lighting, and unsafe pedestrian paths. Falls may be linked to home safety, cycle helmet use, work safety, playground safety, and other environmental obstacles. Violence injuries may be linked to gun use, aggression, alcohol use, and child abuse. These examples show how programs not particularly aimed at reducing brain injuries may use the same data to plan and evaluate prevention intervention strategies.

The majority of TBIs are preventable. That fact, coupled with the seriousness and prevalence of their occurrence, makes TBIs a public health concern. The Louisiana State Legislature has established the Traumatic Brain and Spinal Cord Injury Registry, and has mandated the reporting of these events.

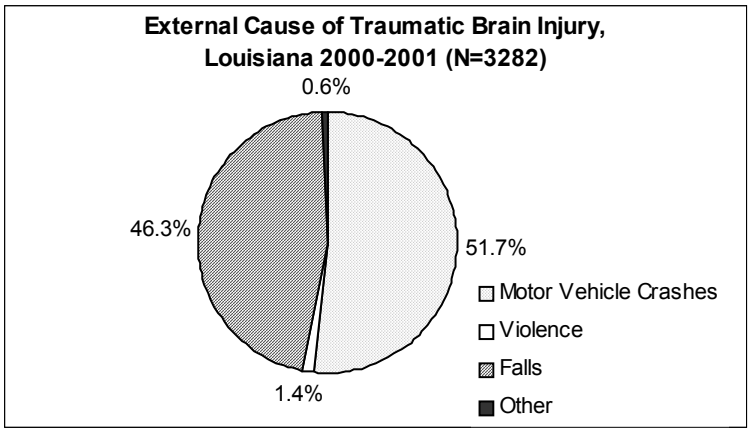
DHH-OPH's EMS/Injury Research and Prevention Program partners with hospitals statewide to obtain surveillance data on TBIs that require hospitalization lasting more than one day. A report on TBIs is prepared annually and is available to the public upon request. It is also published on the Injury Research and Prevention Program web page.

Traumatic Brain Injury Facts

Males are twice as likely to experience a TBI as females. Consistent with national figures, the highest rates of TBI in Louisiana occur among persons aged 15 to 24 years and among the elderly. Motor vehicle crashes are the leading cause of TBI, followed by falls and violence. DHH-OPH's Region 7 (Shreveport area) had the highest 2-year cumulative TBI incidence rate; DHH-OPH Region 2 (Baton Rouge area) had the lowest. Additional studies of data from these regions to uncover any "protective factors" may lead to improved intervention strategies statewide.

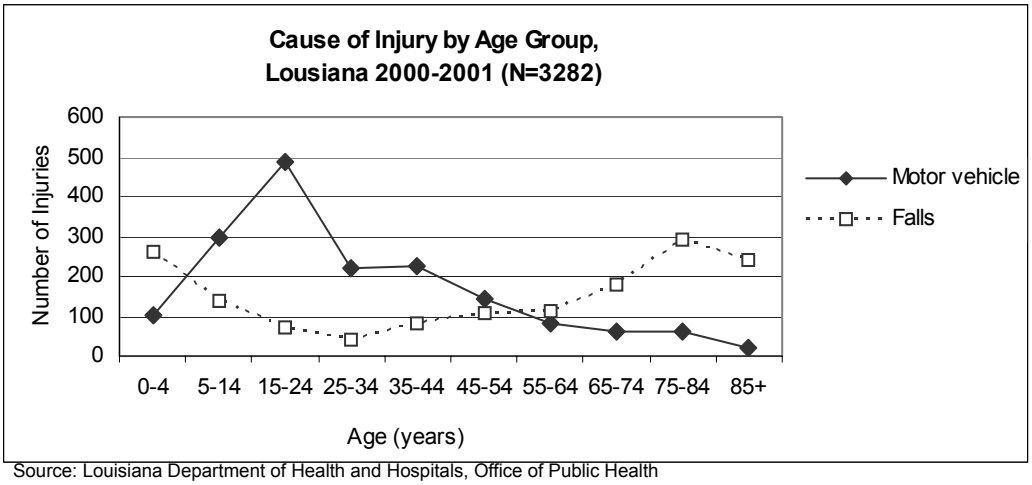
Fifty-two percent of TBI cases are transportation or motor vehicle crash-related. This group includes car or truck passengers; pedestrians; bicyclists; passengers of All Terrain Vehicles (ATVs); motorcyclists , and other or unspecified persons .

Falls were the second leading cause of overall TBIs (46.3 percent). These may occur on the same level (e.g., a fall while playing or walking on a flat surface), or from one level to another (e.g., fall from furniture or fall on stairs).



Source: Louisiana Department of Health and Hospitals, Office of Public Health
EMS/Injury Research and Prevention Program

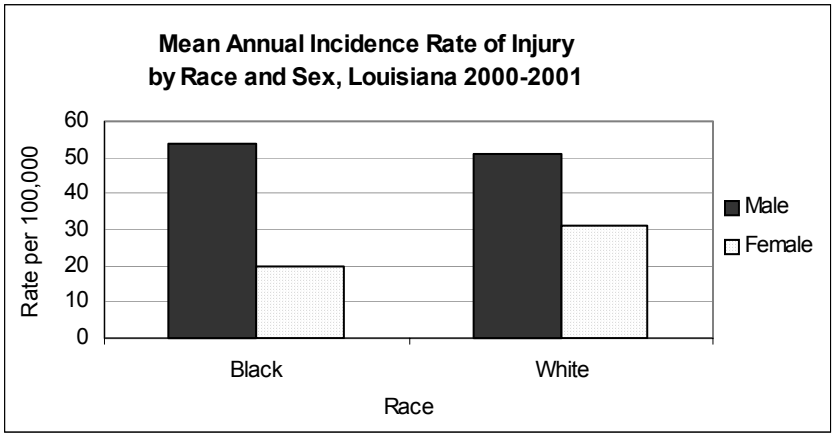
Analyzing TBI cases by age group allows for the development of targeted interventions in sub-populations. Motor vehicle crashes were the leading cause of injury among youth from birth to 24 years of age. Fall-related TBIs, in turn, were the leading cause of injury among persons aged 75 and older.



Source: Louisiana Department of Health and Hospitals, Office of Public Health
EMS/Injury Research and Prevention Program

The following chart shows that males consistently had higher TBI incidence rates than females for the two-year period from 2000 to 2001. The rate for black males was higher (53.6 per 100,000) than the rate

for white males (50.7 per 100,000). White females had a higher TBI rate (31.2 per 100,000) than black females (20 per 100,000).



Source: Louisiana Department of Health and Hospitals, Office of Public Health
EMS/Injury Research and Prevention Program